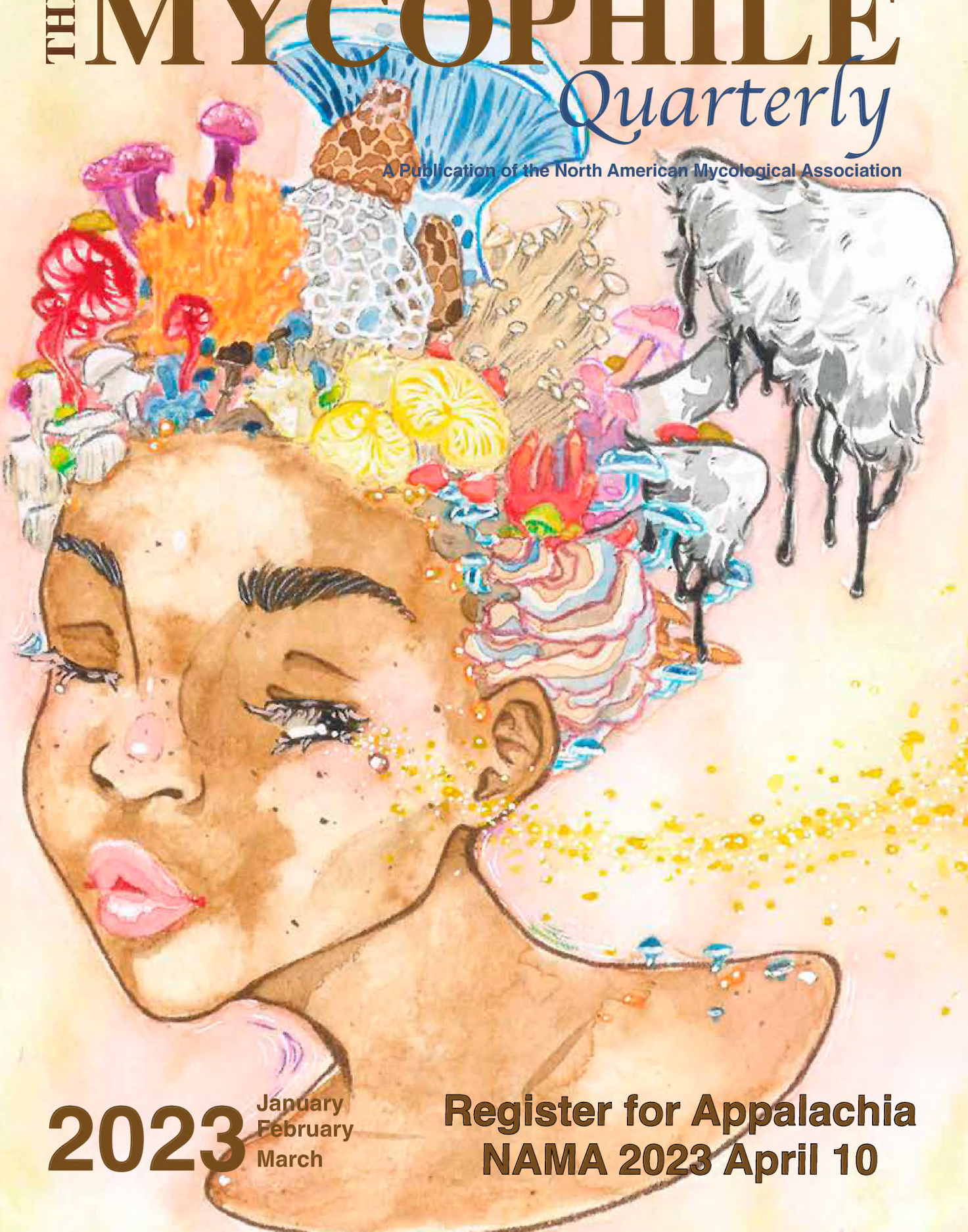
THE MYCOPHILE Quarterly

A Publication of the North American Mycological Association



2023 January February March

Register for Appalachia NAMA 2023 April 10

The Mycophile: Publication of the North American Mycological Association
Editor—Barbara Ching
Graphic Design and Layout—Dr. Theresa A. Kenney Ph.D.
Copy Editor—Bruch Reed
Cover Art— Alyssa La Freniere

President—Trent Blizzard
Chief Operating Officer—Bruch Reed
First Vice President—Dave Layton
Second Vice President—Laura Juszczak
Secretary—Susan Kayser
Treasurer—Melodie Gates
Membership Manager—Luke Smithson

Committee Chairs
Awards—John Lamprecht
Culinary Arts—Julie Schreiber
Cultivation—Tavis Lynch
Education—Marie Kopin
Finance—Melodie Gates
Foray—Mandy Quark
Fundraising—Vacant
Marketing—Kathy Yerich
Medicinal Mushrooms—John Michelotti
Toxicology—Heather Hallen-Adams, PhD
Visual Arts—Rose Tursi
Voucher Collection Project—Andrew Wilson
Website—Derek Zeller

Article ideas should be sent to:
Barbara Ching, Editor
mycophile@namyco.org

Become a member of NAMA:
Visit https://namyco.org/join or email Luke Smithson membership@namyco.org

All statements and opinions expressed in this newsletter belong solely to the individual author and in no way represent or reflect the opinions or policies of the North American Mycological Association.
To receive this publication electronically, please contact Bruch Reed, Chief Operating Officer, COO@namyco.org.
Archive copies of the newsletter are available in the Publications section of the NAMA website, www.namyco.org
Submissions for the next issue of ***The Mycophile*** must reach the editor via email by May 10, 2023. Submissions must be received in editable-document format with photos attached and photo credits provided.

TABLE OF CONTENTS

The Toadstool Picker's News by Trent Blizzard, President 4

Appalachia NAMA Foray Site Visit 2023
by Bruch Reed, Chief Operating Officer and Mandie Quark, Foray Committtee Chair 7

Appalachia NAMA 2023 Logo Design Contest by Rose Tursi, Visual Arts Committee Chair 13

Announcing NAMA Annual Foray Scholarship Program by Luke Smithson, Membership Manager 15

Meet Membership Manager Luke Smithson by Barbara Ching, Mycophile Editor and Past President 16

NAMA MX_23: Regional Foray in Mexico by Zachary Hunter and Bruch Reed 17

New Affiliated Club Profile: Bluegrass Mycological Society by Peter Ninneman 22

The Mycophilic Art Gallery by Robert Courteau 24

Volunteer Spotlight: Tess Kenney by Rose Tursi 26

In Memoriam: Oldriska (Oluna) Ceska by various contributors 28

Announcing the 2022 NAMA Memorial Scholarship Recipient by Bruch Reed 29

In Memoriam: NAMA Institutional Trustee Dr. Tom Volk by various contributors 30

My Magic Mushroom Mistakes by Dave Layton, First Vice President 34

Fungal Diversity Survey: Passing the Torch by Bill Sheehan 36

Breaking the Mold by Making Koji by Joey "Mycæl" Hafley 40

Announcing NAMA Book Club by John Michelotti, Medicinal Mushrooms Committee Chair 43

Book Review: Finding the Mother Tree by Suzanne Simard by Barbara Ching 44
Book Roundup by Bailey Sterk
There's a Fungus Among Us: The Literary (Re)Surgence of Mycelium 46

Book Review by Eugenia Bone
The Psilocybin Chef Cookbook by Dr. K Mandrake and Virginia Haze 49

Spargelsuppe with Morels, a Recipe by Julie Schreiber, Culinary Arts Committee Chair 52

Book Review by Jess Starwood
Mushrooms: Over 70 Recipes Which Celebrate Mushrooms by Martin Nordin 54

Book Review by Melodie Gates
Fruits of the Forest: A Field Guide to Pacific Northwest Edible Mushrooms by Daniel Winkler 56

Instagratitude! by Kathy Yerich, Marketing Committee Chair 57

2023 Myco Calendar 58

About Our Mycophile Contributors 59

Toadstool Picker's Review

by Trent Blizzard

The last quarter has kept your NAMA leadership and volunteer team busy!

Notably, our Foray Committee has kicked off TWO awesome forays for 2023. Read all about them inside this issue of *The Mycophile*. Thanks to Mandie Quark and Zachary Hunter for leading the charge on these two events. Our Website Committee, chaired by Derek Zeller, is setting up an entirely new software system to manage NAMA more effectively and efficiently and also building a new website.

But wait, there is more! John Michelotti and the Medicinal Mushroom Committee have started a monthly book club that will grow beyond medicinal mushrooms. I am excited to host one of the book meetings in June, featuring Daniel Winkler and his new book: *Fruits of the Forest*. The Culinary Arts Committee, led by Julie Schreiber, meets twice a month and is planning great things for Appalachia NAMA 2023. They will also be hosting a spring webinar about eating *Amanita* mushrooms! Rose Tursi and the Visual Arts Committee masterminded an Annual Foray Logo Contest and are responsible for our awesome new foray logos.

The Marketing Committee, chaired by Kathy Yerich, has helped to grow the NAMA Instagram account to almost 21,000 subscribers and supports everyone by getting the word out about NAMA events. We are proud to announce that Luke Smithson accepted the role of Membership Manager and Barbara Ching, our Past President, has taken over as our new *Mycophile* editor. The Executive Committee has paved the way for 14 or more scholarships to our upcoming events. WOW!

Thanks to everyone for working to make NAMA so dynamic! Special thanks to Bruch Reed, our fearless COO, who works every single day to help all of us implement these impressive accomplishments.

Would you like to join us? We are spinning up three new committees and maybe one of them is perfect for you!

These three committees are preliminary, and we are working now to name them and define their responsibilities. Like all committees, they will submit *Mycophile* articles, host webinars, recommend foray presenters, maintain their parts of our website and define their own priorities.

Here are the three new concept committees:

NAMA-Affiliated-Clubs Relationship Committee. OK, I admit that name is kludgy, we need to get a better one. This committee will be responsible for interfacing with our 90+ affiliated-club members, working to provide value to them as well as act as a conduit for information to flow two ways. One of the reasons NAMA exists is to support all these local organizations where so much mycological activity happens.

Conservation Committee: NAMA supports the protection of natural areas and their biological integrity. NAMA advocates the sustainable use of mushrooms as a resource and endorses responsible mushroom collecting that does not harm the fungi or their habitats. I am advocating for a new committee composed of members passionate about conservation to bring
this statement to life.

DNA-Sequencing Committee. This committee is being formed with the blessing of our Voucher Collection Project Committee and should help guide us into this new and growing world science. NAMA's mission statement also states:

NAMA is committed and dedicated to the promotion of scientific and educational activities related to fungi.

Let's bring some of our organizational energy to the promising and exciting world of DNA sequencing, which is informing and exploding our understanding of our mushrooms and their taxonomy.

I am convinced these committees will be popular and dynamic if we open them up and invite NAMA members like you to join and contribute. If there are enough passionate people to form a committee and bring it to life, then that committee should exist.

Will you raise your hand and help us get these new endeavors going? I hope so! Please email me if you are interested and I will help get you involved. president@namyco.org

Trent Blizzard
President

Mycology in the NEWS

Appalachia NAMA 2023 Annual Foray August 24 to 27 Hendersonville, North Carolina

by Bruch Reed, Chief Operating Officer
and Mandy Quark Foray Committee Chair

Former NAMA Foray Chair Sam Landes had gone on and on about how wonderful a place was Kanuga Conference Center, how sumptuous, how comfy, how charming, how beautifully maintained, how welcoming and how perfectly adaptable it would be to the many purposes of a NAMA Annual Foray, so the core Foray Committee team arrived on Thursday, February 2, for our site visit with the highest of hopes, only to find that Sam had not begun to do the splendiferous places justice. To a soul, we were duly dazzled by a venue that seems to have been created by a benevolent force with NAMA's needs specifically in mind.

Airports with relative proximity to our location include the following: Spartanburg, SC (SPG) 60 miles; Asheville, NC (AVL), 14 miles; Charlotte, NC (CLT), 100 miles; Knoxville, TN (TYS) 150 miles. There is an Amtrak train station in Charlotte as well.

To build a successful Appalachia NAMA 2023, new NAMA Foray Chair Mandie Quark has assembled a committed volunteer team from the

leaders of four NAMA-affiliated mushroom clubs of the region. Sam Landes (NAMA Foray Chair Emeritus) and Cornelia Cho, represent the legendary Mushroom Club of Georgia; Kenny Rupert hails from South Carolina Upstate Mycological Society (SCUMS; you gotta love a gritty acronym!); Patrick Mitchell, young founder and president of Blue Ridge Mycological Society; and the redoubtable team of Laurie Jaegers and Frank Bartucca, who have led the venerable Asheville Mushroom Club to new heights of community-building achievement in local mycology. The generous, capable spirits of these stout hearts exemplify what their respective clubs have to offer. Just wait 'til you see the glorious fungal vistas these folks are laboring to lay before you, my fellow NAMAnians!

The word "Kanuga" is said to be of Cherokee linguistic origin and refers to a "gathering place; the current management's heartfelt land acknowledgment honors the history of Indigenous people who were forcibly driven west about 70 years before the original summer mountain getaway was created. David Tyler, Assistant General Manager of the facility, shared with us that before its current association with the Episcopal Church, it had been infamous as a secret "gambling camp." By the late 1930s, construction was underway on the stunning Chapel of the Transfiguration, an impressive structure which, upon entering, fills one's senses with the delicious scent of hand-hewn local pine. Our Voucher Collection Project mushroom identification and preservation activity will be housed in a humongous gymnasium. There are ample class-

room-type spaces for our presenters to hold forth and Minkler Grove, located near the Main Lodge, offers a ring of stand-alone rooms that seem ideal for various workshop purposes. Evening programs will take place in Balthis-Rodwell Meeting hall, which boasts a raised stage with wing space and an SRO capacity of 525, followed by live music and beverage-fueled socials on the outdoor deck of Cunningham-Nevius Pavilion, with an expansive deck overlooking the shimmering, trout-filled lake (ah, MO-NAMA memories!).

The resort's grounds roll all around us with fungiful aged oaks, pines, towering rhododendrons and mountain laurel; a spontaneous foray led by Kanuga's resident naturalist, Mary Kait Brown, led our delighted eyes to discover at least 30 species of fungi, and 3 orchids – remember, every time you see a wild orchid, you have fungi to thank! -- as well as the earliest leaves of such spring ephemerals as trout lily, Trillium, and other signifiers of high-quality woodland.

Fungal highlights included a fairly fresh example of the strange *Calostoma lutescens*, one of many unique and beautiful fungal "critters," as Host Mycologist Arleen Bessette would say, that can be expected to populate our 25th-anniversary Voucher Collection Project species list.

Oops -- I guess the secret is out! We are thrilled to announce that renowned southeastern mycologist Arleen Bessette, whose prolific co-authorship of many fine mycotomes has been a dynamic force in North American mycology, most recently the staggering *Polypores of North America* and the June 2023 release of *A Field Guide to the Mushrooms of Georgia*, has accepted our invitation to serve as as Host Mycologist for Appalachia NAMA 2023; Alan Bessette, who served as Chief Mycologist for our 2015 Annual Foray, will be among our distinguished roster of

myco-presenters, in addition to at least four paid workshops, including DNA Barcoding, Cordyceps Cultivation, Mushroom Basket Weaving and a UV Night Hike!

Back to the sumptuous wonders of our venue: the Main Lodge offers 61 luxuriously comfy, updated hotel-style rooms with modern walk-in showers and outdoor decks. 41 Guest Cottages line the lane that winds down around Kanuga Lake; each contains 3 to 4 bedrooms, with two sitting porches complete with porch swing. We also have access to a number of Guest Houses tucked into the hills overlooking the resort and lake, each beautifully maintained; for the site visit, we stayed in Guest House C; my two nights' stay in its whimsical welcome left me wistful to return! We will also offer a limited number of tent-camping spots (about 25 tents), split between a secluded upland forest clearing (step outside your tent and start foraging, folks!) and a lower meadow with closer access to restrooms, as well as a limited number of Commuter Passes and Single-Day Passes for those who live locally and/or choose to stay offsite.

Among the many tangible excitements NAMA will offer in conjunction with this year's event are 14 -- that's FOURTEEN -- full-ride Annual Foray Scholarships, funded by NAMA's Scholarship Fund through generous donations by our members. Seven of these scholarships will be administered by NAMA committees (Visual Arts, Culinary Arts, Cultivation, Education, Marketing, Medicinal, Toxicology) and seven more will be awarded and administered by 7 of the 15 NAMA-affiliated clubs that responded to our invitation to be considered.

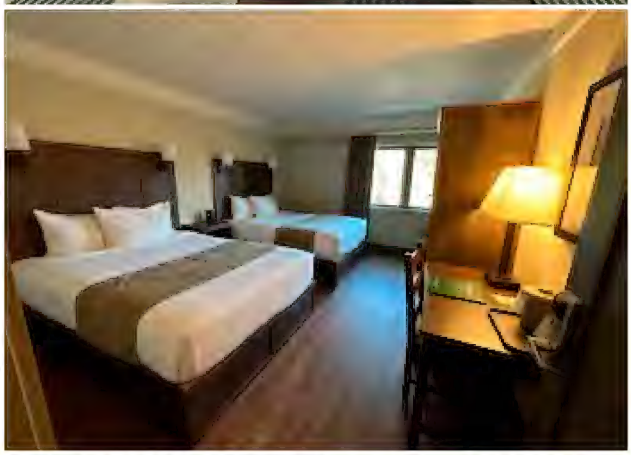
Scholarship rules are simple and both committees and clubs are coming up with ingeniously fun ways of selecting their award recipients, including NAMA's Culinary Arts Committee's *Chopped*-style cooking competition.

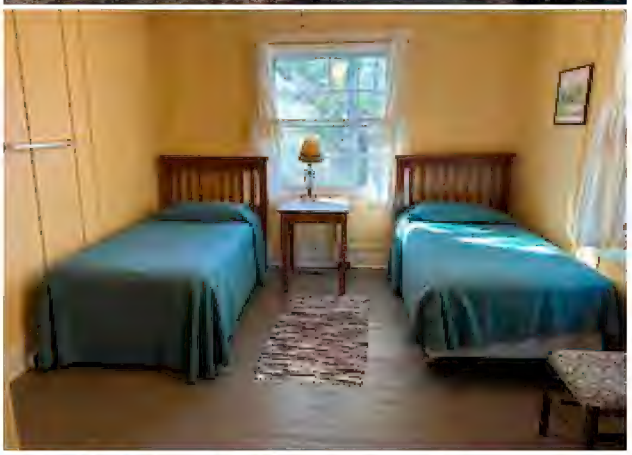
The ineffable treasures of Annual Foray presentations will not all disappear into the mountain mist; in fact, they will be rendered effable thanks to Drew Ames, who heads up a professional documentary film crew. He was so enthralled with his experience at MO-NAMA 22 that he will be returning this year to capture more of our mycostravaganza and to record select presentations for later online broadcast.

As I sit down to compose this Appalachia NAMA 2023 teaser, my explosive enthusiasm is

tempered somewhat by the daunting challenges facing NAMA during the month of March; our Web Administrator, Derek Zeller of Nebraska Mycological Society, is working tirelessly to get NAMA membership software converted to a new system that will enable us to achieve heretofore undreamt-of rungs of mycological education, resources and community building. It so happens that this conversion is underway just in time to kick off registration for our signature event; as I write this, I do not know what that registration form looks like but fellow NAMAsters, please know that you have a relentlessly passionate team of creative humans working their guts out to make both NAMA the organization and the Appalachia NAMA 2023 event the best you've ever seen.

Click this link to navigate to Appalachia NAMA 2023 registration!
https://namyco.org/annual_foray.php





Appalachia NAMA 2023 Logo Design Contest Results

by Rose Tursi, Chair, Visual Arts Committee

The five finalist designs for the Appalachia NAMA 2023 event logo.

We received almost 50 delightful entries to the Appalachia NAMA 2023 Logo Contest. After submissions closed, some members from NAMA's Marketing, Foray, and Visual Arts committees got together on Zoom and, over the course of two hours of thoughtful discussion, narrowed the entries down to five finalists.

We liked how these designs were clean and professional, and we especially enjoyed how they depicted distinct and real mushrooms known from Southern Appalachia. These five entries were then sent to NAMA's Executive Board where the winning entry was selected.

Wanting to diverge a little bit from the norm, we liked this design's bold colors and how it's a bit groovier and edgier than designs created for previous NAMA forays. We also love how it depicts the official NC State frog, the Pine Barrens treefrog (*Dryophytes andersonii*) along with Parrot Waxcap Mushrooms (*Gliophorus psittacinus*). At the meeting, NAMA Chief Operating Officer Bruch Reed described it as an inversion of the classic 'toadstool' folk term. It's a Mushroomstool!

Winning Design by Tiffany Theden

After some minor adjustments to the font and text, which the winner was happy to make for us, we have our final logo design for our big Continental Foray happening this August. Special thanks and congratulations to the talented artist behind this design – Tiffany Theden! She also provided a line art version, which some of the Visual Arts Committee members will be using to make a 3D clay stamp for some exclusive ceramic pieces.

Tiffany first heard about the contest through NAMA's Foray Committee Chair, Mandie Quark, whom she met through their work together with FunDiS. Tiffany is an active volunteer with FunDiS and the West Coast Rare Fungi Challenge, helping design pamphlets and the FunDiS newsletter. She first got involved with the organization after graduating from University of California, Santa Cruz in Environmental Studies and Biology.

She currently works as a Stewardship Assistant for the Chelan-Douglas Land Trust in North Central Washington, monitoring trails, battling invasive plants, and doing habitat restoration with native plants.

She's also an alternate board member for the NW Lichenologists and a board member of the Wenatchee Valley chapter of the Washington Native Plant Society, where she recently gave a talk on the West Coast Rare Fungi Challenge. You can watch it online here: https://youtu.be/eg-nQL1ncYBk

"I came up with the design idea how I do most of my natural history illustrations. I like to include several different species, and to highlight species that people might not know about. I looked up

Tiffany Theden with some *Usnea* and *Lobaria* lichens.

a list of the state animals for NC, and while cardinals are cute, I like to draw the less common species. Amphibians are fantastic little dudes that are facing a brutal future in the face of climate change, so I thought I should include one of them. The Pine Barrens treefrog is the State Frog of NC and after looking up photos of them I found out how incredibly charming they are. Since the design needed to be two colors at the most, and frogs are typically green, I went with a green mushroom. The fanciest, shiniest, gooiest green mushroom I know is *Gliophorus psittacinus*, which I thought would look great growing out of the frog's back. It's ok, they're buddies, I don't think it's going to turn out to be a *The Last of Us* situation for the treefrogs! To ground the design I used an outline of NC with some other mushroom species in silhouette and a black moon to give the parrot waxcaps some nice background contrast. I usually do a mixture of watercolors and colored pencil on ink drawings, so trying to just do a two-color print was a pretty new experience for me. I'm glad everyone liked it and am so honored my design was chosen!"

Thanks so much Tiffany, and we're equally honored to have your beautiful art as the logo of our big event! As stated in the contest rules, Tiffany will be receiving a one-year membership to NAMA as well as a set of all the swag created with her design.

But wait, there's more! One of the scholarship tickets to attend Appalachia NAMA 2023 was earmarked to come directly from the Visual Arts Committee. We had tossed around the idea to grant the logo winner this scholarship before the contest launched, but it was problematic to write that into the contest rules since the scholarship recipient must also be 21+ years in age and must not have attended a NAMA event previously. But now that the contest is concluded and the winner happens to fit these parameters, the Visual Arts Committee has voted to grant this scholarship to Tiffany. She was also asked to join the volunteer-based Visual Arts Committee for a minimum of one year as a requirement of receiving the scholarship. She accepted! So triple congrats to Tiffany for winning the logo contest, receiving the Visual Arts Annual Foray Scholarship to attend Appalachia NAMA 2023, and becoming the newest member of NAMA's Visual Arts Committee.

You can find Tiffany on iNaturalist at: www.inaturalist.org/people/thrasherbird

Be sure to say hi to Tiffany and congratulate her in person at Appalachia NAMA 2023. It will be her first NAMA foray.

Annual Foray NAMA-affiliated Clubs Scholarship Program

by Luke Smithson, Membership Manager

NAMA is pleased to announce that we have instituted a new set of Annual Foray Scholarship opportunities. We have made $3,500 available in scholarships to be administered by our affiliated clubs and applied to our upcoming Annual Foray, Appalachia NAMA 2023, August 24 to 27, 2023.

Our goal is to host seven Annual Foray attendees on scholarship who are selected by NAMA-affiliated clubs. All NAMA-affiliated club contacts were emailed with the scholarship program guidelines and needed to apply for a chance at being selected by March 1, 2023, by submitting a letter of intent to coo@namyco.org. NAMA will select from the pool of applicant clubs by random drawing out of a hat. Clubs selected to administer an Annual Foray Scholarship to attend Appalachia NAMA 2023 must submit their selected attendee by June 1, 2023.

We are proud to note that in addition to the NAMA-affiliated Clubs Scholarships, we have also made another $3,500 in Annual Foray Scholarships available to seven of our active NAMA Committees for them to administer and award (stay tuned for an announcement from NAMA's Culinary Arts Committee, chaired by Julie Schreiber, on their upcoming *Chopped* cooking-show-style scholarship contest!) These seven scholarships, as well as six Voucher Collection Project Students and our MSA Memorial Scholarship recipient, will bring the total number of scholarship attendees expected at Appalachia NAMA 2023 to twenty-one!

Following are the Rules and Guidelines of the NAMA Annual Foray Affiliated-club Scholarship Program:

1. Participating clubs shall institute a fair, transparent and open process to select their recipient.
2. Each recipient shall receive $550 in scholarship funds. They may use that to apply to their registration/lodging fees and any remaining will be provided to them as a travel stipend upon arrival to the event.
3. We recognize that the $550 scholarship may not cover travel expenses completely. We recommend that clubs consider adding some additional funds for the recipient if the club wants to have their recipients' travel expenses covered.
4. Recipients must be first-time NAMA Annual Foray attendees to be eligible. Minimum age 21.
5. Recipients must join NAMA before attending the event and will be offered a complimentary 1-year membership in conjunction with the scholarship award.
6. Recipients must be chosen by their club by June 1, 2023; they will be provided with a registration coupon code to utilize their scholarship and must register themselves for the event by June 15th, 2023.
7. Unclaimed scholarships may be administered by the NAMA Executive Committee. Any left-over funds may be rolled into our 2024 Annual Foray Scholarship Program.
8. Recipients are not expected to volunteer at the event, nor to be a part of the committee or write a *Mycophile* article on their experience. However, those are always welcome :). Recipients are not expected to do any official presentations or be experts in the field of mycology.
9. Clubs that administer these scholarships may require the winner to provide some value back to

their club as part of their application and selection process. NAMA has been inspired by and has modeled our Annual Foray Scholarship Program on Minnesota Mycological Society's Marek Turnowksi Memorial Scholarship, which does require recipients to write a club newsletter article and report back to their club about their NAMA Annual Foray experience.

Mycophiles, Meet Membership Manager Luke Smithson!

Luke is NAMA's new Membership Manager and he's eager to talk with you about joining NAMA, renewing your membership, and anything to do with mushrooms. He's familiar with mycophiles and mushroom clubs and mushroom forays – in other words, we're his people and vice versa. He was President of NAMA-affiliated club New Jersey Mycological Association (NJMA) 2017 to 2019 and still active as a volunteer with this 600+ member club. He's also a great fit for the role of Membership Manager; as he wrote in his application letter, his "volunteer experience with the New Jersey Mycological Association and… professional experience as an executive-level manager have taught me the skills that this position requires. Much of my volunteer and work experience requires a high level of communication, organization and professional-level customer service."

Luke is a professionally trained chef, currently serving as executive chef at a catering and special-event-hosting company in the Philadelphia area. The father of two teen-aged daughters, he spends his free time with them and enjoys fishing, hiking, hunting, gardening and, of course, looking for mushrooms. He especially enjoys high-altitude hunts; most recently, he traveled to Greenland where he was able to appreciate many beautiful plants and fungi.

Viva Micología! NAMA_MX23: Regional Foray in Mexico

by Zachary Hunter and Bruch Reed

By the time *Mycophile's* first issue of 2023 goes to print, it is likely that all available spots to attend NAMA_MX23: Regional Foray in Mexico will be filled; initial invitations to complete the preliminary questionnaire went out to all NAMA members on February 1 and interest has vastly exceeded expectations, both below and above the Mexico/U.S. border, to such an extent that we are already looking forward to planning future such events! We are nevertheless including the link to the required preliminary questionnaire here and encouraging those who might be interested in NAMA_MX23 to complete it, as there is a possibility of adding more spots.

CLICK HERE TO FILL OUT NAMA_MX23 PRELIMINARY QUESTIONNAIRE

NAMA_MX23 Event Organizer Zachary Hunter shares the following thoughts on the genesis of this event: "For several decades, North American mycology has been proceeding apace, but there has been a presumed language barrier between the Spanish-speaking (and the many Indigenous-language-speaking) populations of North America, and the English-speaking population. The shared language of mycology and love of mushrooms allows us to jump these barriers in a short time. In working with local mycologists here in Mexico (who are equally as excited as I am to share Mexican mycology with fellow mycophiles) it became obvious that the current wonder of mushrooms should be shared both socially and professionally. NAMA_MX23 is set to start fulfilling this vision of bringing together North Americans in their love of fung and also enabling the academic representatives of all of North America to meet one another. Who knows what future projects will come of this? That is the most exciting thing."

Event Outline

NAMA_MX23 will have a more peripatetic itinerary than our familiar Annual Forays, beginning with arrival in Mexico City on July 30 for two nights' stay at the comfortable Hotel Condesa MX in Mexico City. On August 2, a bus will depart from the hotel heading toward our main location of Hotel Rodavento Valle de Bravo, the base for all foray activities. Attendees will return by bus on August 5 for a final night at Hotel Condesa MX before departing on their own for Mexico City Airport on August 6.

Day-to-day General Planned Itinerary

This event is an inaugural one for NAMA, which we dare to hope will be far from the last adventure of its kind. Event plans continue to evolve

and what follows below is what our event organizers have planned as of now. Please note that this itinerary is, by nature, subject to change as opportunities reveal themselves.

Sunday, July 30: Our trip begins with an easy arrival day; we have reservations at Hotel Condesa MX. Check-in time is 3:00 PM Mexico City time. We will have volunteers on site until 8:00pm to check in attendees as well as administer COVID tests. Check-in will resume at 8:00 AM at breakfast the next morning for attendees arriving late. There are no official events planned for this first night, but there may be break-away groups, as well as guidance on what to do in Mexico City via the event's WhatsApp Group.

Monday, July 31: Check-in for later attendee arrivals begin at 8:00 AM near breakfast, as well as our first mandatory COVID testing location. All attendees must test negative for COVID in order to join the first day's activities. Breakfast is served at the Hotel, and we will be met by mycologist Dr. Roberto Garibay-Orijel to talk about our field trip to the UNAM Herbarium Botanical Gardens in University City, for which we will depart when attendees have eaten and shown their first negative COVID tests.

We will eat lunch during our field trip at one of the many fine eateries surrounding the university and return in the afternoon for a short siesta before we go to Monstrua de Agua Cerveceria – also home base of Comunidad Simbiosis and mycologist Ireri Monter – for some mushroom beers made with local matsutake (*Tricholoma colposii)* and Blue Lactarius *(Lactarius indigo*) and our first mushroom dinner. Zachary and Kimberly Hunter will emcee this evening event and give an idea of what to expect in the coming days. We will recognize our NAMA_MX23 Foray Scholarship recipients as well. Following introductions and dinner, we will enjoy a brief presentation on the Mycology of Mexico, focusing on how Mexicans view their mycological heritage, mycopreneurship and more.

Tuesday, August 1: Our shuttle bus will depart from Hotel MX Condesa after breakfast for a roughly 2.5-hour journey Southeast to Hotel Rodavento Valle de Bravo, our home for the next four nights. Buffet-style lunch and dinner will be served by Rodavento. After check-in, Adriene Rivera Jauregui and Waldamor Franco, General Manager and Owner of the resort, respectively, will give an introduction to Rodavento, explain the grounds and various amenities available, and then the afternoon is for attendees to relax, explore the resort and make themselves comfortable.

After dinner, we will gather in the presentation space to listen to Dr. Cristina Aguilar Burrola talk about the Indigenous Community of Oxtotilpan, where we will be collecting specimens for vouchering. Our foray leader will talk about the other locations will be visiting as well. There may be options for an open mic for later in the evening.

Wednesday, August 2: We will be set up to take our second mandatory COVID tests before and after breakfast. Please note that we will be traveling to a protected Indigenous Community as part of our Science grant, and thus it is imperative that everyone tests COVID-negative to join this field trip in order to protect our hosts and hopefully new friends.

Attendees will split into two groups: Group 1 will be the first to travel to Oxtotilpan for the first day of mushroom collections. The Community of Oxtotilpan will provide us a late lunch and demonstrate how they cook and eat their mushrooms, as well as join in discussions about their particular traditions. Group 2 will be heading to another location where we can harvest fungi, but these fungi are for ID purposes only, and cannot later be used for scientific specimens..

Both groups will return in the later afternoon. Mushroom specimens will be dropped at the ID table with the volunteers there. Vouchered specimens will be processed and the rest of the afternoon is for attendees to clean up, siesta, stroll, swim or soak. We will reconvene for dinner at Rodavento at

7:00 PM, dining in front of a moderated panel of esteemed Mexican mycologists who will be talking in greater depth about the current state of mycology in Mexico, hopes, setbacks, wins and what to look for in the future.

Thursday, August 3: Almost identical to Wednesday except that the foray groups will switch places; we will again foray under the guidance of expert mycologists, collect for vouchering with the Indigenous Oxtotilpan Community and collect for ID-only at our other location. Our return times and dinner times will be the same as Wednesday; however, we will be joined by members of the Indigenous Oxtotilpan Community and other representatives of Indigenous groups for a moderated panel on ethnomycology and ecological heritage.

Friday, August 4: On Friday, the entire group will remain at Rodavento and we will have several foraging groups led by mycologists to roam about the hotel property and gather what they find for information and possible mycophagy! Some forays will be shorter and others longer; these options will become more clear as we get closer to the event. For those not wishing to roam in the woods,

there will be plenty of other options including microscopy table, observing the process of specimen vouchering, talking to mycologists, walking around by themselves and browsing community vendors. At 2:00 PM, attendees are welcome to join in the public food preparation for the final meal at Rodavento.

Our final panel will be a selection of chefs and mycophagists from around Mexico who will talk both about the traditional ways of cooking and eating, as well as the modern food movement in Mexico City and beyond. So far we expect to have Chef Daniel Frydman of Le Chese, from Valle de Bravo; brewer and mycopreneur Matthias Vera-Cruz Dutinet from Monstrua de Agua Cerveceria; Chef Mario Espinosa from Tencüi, whom we will join on Saturday night for our final dinner in Mexico City; and local cocineras from the communities in the area.

Saturday, August 5: Please plan on packing up in the morning ahead of or just after breakfast. At 10:00 AM, bags in tow, we will gather around the ID Tables and Voucher Lounge for a final presentation on our finds, vouchering successes and what the next steps are for NAMA with regard to Mexico; we will pose for final group photos and load up the buses to return the Hotel MX Condesa for our last night in Mexico City. In the evening, we will gather for the last time for a very special dinner at Tencüi Restaurant in Mexico City, where Zachary and Kim Hunter will close our adventure with a short talk, recognitions and final words.

Attendees are advised that there may be a post-dinner dance party.

Mexican Institutional and Business Partners
Following is a partial evolving list of entities working with us on this inaugural venture:
The Fungivore - Myco- Education and Community Building through real world experiences
UNAM - Universidad Autonomia de Mexico
MEXU - National Herbarium of Mexico
Monstrua de Agua Cerveceria
Tencüi - Restaurante de Hongos
Rodavento Hotels
Collectiva Simbiosis
Hotel Condesa MX

Event Packages
Attendees have two all-inclusive event packages from which to choose, as follows:

Single-occupancy package, all-inclusive package for those attendees requiring single-room accommodations at our Mexico City hotel and at Rodavento Valle de Bravo: (price is $3,000 USD, including $500 nonrefundable deposit). Please note that we have a limited number of these single-occupancy packages available.

Double-occupancy package, all-inclusive package for those attendees sharing rooms at our Mexico

City hotel and at Rodavento Valle de Bravo with one or more people; please note that there is no discount for groups of 3 or more: (price is $2,500 USD, including $500 nonrefundable deposit).

At the time of their registration, attendees must certify to the following stipulations:
1. Registrants certify that they currently possess, or will before traveling for NAMA_MX23 be in possession of, passport that is valid through January 30, 2024; this is a basic travel requirement of Mexico; recently, some travelers to Mexico have been denied entry by some immigration officers if their passport expires within 6 months of their visit. Failure to be in possession of this vital document by the time of your trip will not be considered grounds for any refund.
2. Registrants certify that you they will procure your own air travel and ground transportation and will arrive at Hotel Condesa, DFMX no later than 10:00 PM on Sunday, July 30, 2023 for the start of NAMA_MX23. All ground transportation after your arrival will be arranged and provided by NAMA_MX23 event organizers from 10:00 AM July 31 through the arrival back Hotel Condesa MX on August 5, 2023; NAMA_MX23 attendees are required to arrange and provide their own ground transportation back to Mexico City Airport on August 6, 2023.
3. Registrants certify that they are willing and able to hike at elevations of between 7,500 and 10,000 feet, and/or acknowledge such personal physical limitations may necessitate that they forgo some NAMA_MX23 activities.
4. Registrants agree to procure and bring with them two (2) COVID rapid tests to be administered in the presence of event organizers on Day 1 (Sunday July 30, or early on Monday, July 31), and to test again on Day 4 (Wednesday, August 2) before being cleared to visit the the forays, and to submit the results of these COVID tests to event organizers. Anyone testing positive for COVID agrees to isolate and follow guidelines to keep other attendees and local people safe. As the date of departure for this event approaches, we ask that registrants please keep themselves protected from COVID. Please note: if reimbursement for a last-minute COVID-related cancellation is a concern, it is recommended that registrants purchase trip insurance to cover such a loss.
5. Registrants agree to provide your valid email address and mobile phone number to event organizers and to be responsive to all NAMA_MX23 communications before and during the event.
6. Registrants agree to join the specific dedicated NAMA_MX23 WhatsApp groups. WhatsApp is a free messaging app that is used worldwide for phone calls, messaging, sharing photos, video chat and more. Event Organizer Zachary Hunter finds it the best way to connect and keep connected on these trips.
7. One of the highlights of the event is a visit to a small local Indigenous Community. This unique privilege is afforded attendees through the personal connections of our event organizers and constitutes an enormous honor. It is expected that all attendees will conduct themselves in the utmost respectfully deferential manner at all times, particularly with regard to this Indigenous Community, its leaders and members.
8. In an exciting, evolving development, NAMA's Voucher Collection Project is working with Mexican research institutions and relevant authorities to enable the transport of some scientific specimens back to NAMA's specimen repository at Chicago's Field Museum of Natural History. However, it is vital to note that NAMA_MX23 attendees are solely responsible for any and all items they choose to bring through U.S. Customs both legs of travel. Neither NAMA nor our event organizers will be in any way responsible for prohibited confiscated items, nor for any personal or legal consequences that result therefrom. Folks need to make sure anything with which they choose to travel is legally permitted. Any import permits obtained by/through NAMA will not cover individual NAMA_MX23 attendees.

For registration questions and/or assistance, please contact NAMA_MX23 Event Organizer Zachary Hunter at chef@thefoodbender.com, and/or NAMA Chief Operating Officer Bruch Reed at coo@namyco.org

New NAMA-Affiliated Club Profile: Bluegrass Mycological Society

by Peter Ninneman, President

NAMA is very happy to welcome a new club to our roster of affiliates: Bluegrass Mycological Society!

Hello! My name is Peter Ninneman and I'm the president of the Bluegrass Mycological Society (BMS). I started studying mushrooms in 2018 while living in St. Louis. I am hugely indebted to the fine folks of the Missouri Mycological Society! When I moved back to Kentucky in the summer of 2020, I sought to rally the fine citizens of this commonwealth to join me on a deep dive into mycology. I am very grateful to John Austin for having founded BMS in February 2014 as a Facebook group and for inviting me to help lead and manage the group. Since that time, have had great growth and in January 2022 it was clearly time to reach out about getting our club affiliated with NAMA; Chief Operating Officer Bruch Reed let me know that we should reach out again in a year from that time to let NAMA know how we had done and if we were still motivated to move forward. Despite frequent drought conditions we managed to have an amazing 2022. Following are some highlights:

● We hosted 9 general forays spanning central and eastern Kentucky with the incredible generosity of group members allowing us to use their private land.

● Club Trustees Neelun Lew and Amos Zoeller found ways to get younger, shorter mycologists involved! A request from a member of our BMS Facebook group led to them befriending a Girl Scout troop of future myco-enthusiasts to celebrate and learn about everything fungal, both in nature and the existing body of science. They also took full advantage of a short but magical rainy period in August to hold our first-ever kids' foray. It seemed there was little need of their expertise, as the young attendees brought dozens of species to pack the ID table. The kids loved being able to use UV flashlights and dropper bottles of chemicals to experience some more nuanced features of identification. Amos will never forget an avid Minecraft player who told him to "go touch grass" and was very inquisitive about and appreciative of the mushrooms he found. Moving forward, we can't wait to keep up this really special area of outreach.

● Amos gave a presentation at a "Nerd Night" at a local brewery to spread the good word about mushrooms.

● Neelun, Amos, and I participated in skillshares to connect with and teach the local community.

• Neelun and I were extremely honored to be asked by the Kentucky State Parks naturalists to teach them about mushrooms so that they can inform park visitors and inspire them to learn about and appreciate our fungal friends.

• Our friend Fenner Martin Morse has been aggressively studying microscopy and genetic sequencing, learning a lot from partnership with the Hoosier Mushroom Society's Stephen Russell. Fenner's goal is to collect and voucher as many fungal specimens as he can in his lifetime to be sequenced and preserved for others to study in the future, when techniques have advanced. With his personal fungarium, he plans to particularly study xylariaceous fungi and fungi cultivated in vitro on incubated dung. We are extremely excited that he is closing in on his goal of having a personal PCR and electrophoresis lab in his home!

• We also participated in the inaugural foray of our friends at the Central Appalachian Mycological Society.

We can't wait to grow and engage our community further, and to showcase the marvelous fungal diversity of our state for a wider audience! If you would like to get in touch or engage with our community you can follow our Facebook group and/or email bluegrassmyco@gmail.com.

The Mycophilic Art Gallery

by Robert Courteau

My name is Robert Courteau, I'm a member of the NAMA Culinary Arts Committee, a former chef, President of the Ottawa Mycological Society, and creator of Think Fungi. I'm also a mushroom art collector. Compared to some of you, my passion for fungi started a little later in life. When I was in my early twenties, I was cooking in the kitchens of Prague, Czech Republic, and was introduced to mushroom hunting, a national pastime for many in the rural areas of that country.

I immediately fell in love with mushroom hunting. I have always been an outdoors person, having grown up frequently camping with my family, then friends, and into my university years. I had been living in Prague for a few years already and desperately missed the Canadian wilderness. It's no surprise that I quickly fell in love with the hobby, as foraging for fresh wild edibles is the dream of any chef. However, just a few years later, I would find myself back in Ontario, Canada, having to relearn all the mushrooms that grew on a different continent.

The more I learned about the mushrooms in my area, the more I learned about the role of fungi, the diversity of fungi, and the plethora of fungi fun facts. After a decade of learning, I had realized that I had an uncanny ability to keep the interest of people when I passionately spoke about fungi. It was then that I got into fungi education. I launched Think Fungi, which predominantly focuses on the education and conservation of fungi, but is now starting to incorporate fungi research as a third pillar of the organization's mission.

It was at the onset of Think Fungi that my wife bought me a piece of artwork, made by a British Columbian artist, Imogen Carter. *The Bear Who Ate the Forest* is the title of the work and it depicts all these elements of nature within an outline of a sitting bear. I loved it. I hung it on my wall and through the early days of Think Fungi I would glance over and feel inspired. This piece of artwork has always resonated with me.

It wasn't until this year, when walking through a craft show, that I came across Kyla Bell and two of her pieces that really stood out to me. One was full of color. A variety of mushrooms prominently stood out against a white background. The other was so cute: a mouse standing atop a bolete, with an acorn hat. I bought them both, but where to put them?

I leaned them against the wall for months, not sure where exactly I wanted to place my art. Then two months ago I visited a little gallery in a small town and came across a piece that I absolutely loved called *Spore Witch*. The artwork is full of vibrant colors, varied mushrooms, and it has a particularly unique motif. I had to have it, and immediately bought it. The gallery owner wasn't even sure who the artist was. It was a new addition from an unknown artist, and it took the gallery owner a week to figure it out and get ahold of her (her being Alyssa Lafreniere, the artist whose *Spore Witch* adorns the cover of this issue of the *Mycophile*).

Once home I realized I was establishing quite the collection of mycophilic artwork, and it deserved its own wall. Up they went, on the wall behind me. While I wanted to be able to see them all the time, I thought it was more important that others see them when I do video conferences, which is quite often these days. They trigger questions from others, and a subsequent conversation on mushrooms, art or the importance of supporting local artists.

Ironically, growing up, I never cared much about art. I was absolutely terrible at all forms of art, so it was not a field toward which I felt particularly drawn. However, much like my late start with fungi, my love of art is now developing. As it develops, I see some similarities between the world of fungi and the world of art.

There are the mushrooms and the artists who get all the acclaim - Chanterelles, Amanitas, Picasso, Monet - and then there are *all the rest.* The general public can perhaps name ten artists, and ten mushrooms – maybe. Members of NAMA know full well that there are millions of fungi in the world, and they are all critical to our ecosystem. They each hold at least one little secret, a mysterious feature, which we all hope one day to discover. Local artists, young and old alike, also hold such mysteries. There isn't a single Picasso painting that has resonated with me as much as *Spore Witch*, and it's millions of dollars cheaper. Furthermore, the local artist appreciates that money a lot more than the deceased Picasso.

Years ago when I realized my passionate talks on mushrooms were loved by others, I entered into fungi education. Now I realize the passion I have for mycophilic art. I display it prominently and discuss it excitedly. As such, I decided to launch an online art gallery to display and sell the amazing mycophilic artwork that I find. Right now I'm focused on researching and promoting lesser known artists and their art, but soon I'll be back in the lab, researching lesser-known fungi. Whether it's a lesser-known fungi or a lesser-known artists, they all have something to contribute and deserve an opportunity to showcase their talents, no matter how niche.

If you would like to check out any of the artwork mentioned in this article, please visit the Think Fungi art gallery at https://ThinkFungi.org/mushroom-marketplace/

Volunteer Spotlight
Dr. Tess Kenney

by Rose Tursi Visual Arts Committee Chair

As you likely know, NAMA is a volunteer organization made up of individuals from all walks of life who've come together over a shared love of mycology. Within this organization are committees focused on various subtopics, one of those being the visual arts! The Visual Arts Committee is made up of illustrators, designers, fiber artists, crafters, photographers, art historians and more, all providing their specific set of skills to help make NAMA the amazing organization it is.
"Today, I want to give a shout of appreciation to one volunteer in particular: Dr. Tess Kenney."

"I knew I wanted to be an artist when I was very young but being an artist was not encouraged as a career path." Nevertheless, Tess went back to school in her early 30s, going on to complete her BFA in Drawing, an MFA in Digital Media and a PhD in Art Education. Today, she is the Chair of the Visual & Performing Arts areas for Concordia University Wisconsin and Ann Arbor Michigan.

In mid 2015, Tess was approached by Steve Shapson, who was president-elect at that time of one of NAMA's affiliated clubs, Wisconsin Mycological Society (WMS). He asked for her help to revamp the club's website and the rest is fungal history. She not only rebuilt their website, but started working her graphic magic on their newsletter, brochures, t-shirts and other support materials, quickly garnering WMS national notice. It wasn't long before NAMA recognized her talents. She was asked to join the Visual Arts Committee and serve as the Graphic Specialist for the *Mycophile*. That's right, she designed the layout of this magazine you're reading right now!

When a logo was needed for NAMA's upcoming NAMA_MX: Regional Foray in Mexico, Tess stepped up to the challenge. After a Zoom meeting with Event Organizer Zachary Hunter, Tess wanted to build a logo that recognized the beautiful style of preHispanic Mesoamerican art forms and Mexican folk art. She researched historical sites to come up with the event logo.

Zachary was quick to approve the artwork. "I really appreciate how the images are drawn from Mexican design, but doesn't actually copy anything directly. Super smooth. Super svet. I like."

Tess has continued her journey in the arts showcasing her love for her fungal subject matter as evidenced by her series of mycological oil paintings in “The Forest Floor.” Her newest series of myco-art utilizes printmaking in the forms of etching and lithography. Beelow are several of her recent etchiing on steel plates. You can find more of her fungi and other work at www.Tesskenney.com

NAMA’s Visual Arts Committee is a volunteer group of artists and art enthusiasts whose happy place lies in the crossroads of art and mycology. If you’re interested in learning more, please reach out to visualarts@namyco.org

In Remembrance of Oldriska (Oluna) Ceska

This article was adapted, with permission, by Michael Burzynski, from Facebook posts by Adolf Ceska and reprinted with permission from OMPHALINA Vol XIV, No. 1

Oluna was born in Prague, Czechoslovakia, on July 1, 1938. She grew up near Beroun, an area with rich natural history, fossils, and geology. Her interests in botany and mycology were formed during explorations of the Czech Karst, an extensive limestone region. She was always interested in drawing and painting, and her keen power of observation, her clear descriptions, and her careful line drawings are an important record of her collections.

After finishing high school in Beroun, Oluna had to choose between Art and Science, and she decided to study biology/chemistry at Charles University in Prague. She specialized in mycology. Her work on her dissertation, Melanconiales (Fungi Imperfecti) of Czechoslovakia, required skills in herbarium practices, microscopy, scientific drawing, and patience. At the university, she met her future husband, Adolf, who brought her to Victoria, BC.

At the University of Victoria Department of Biology, Oluna worked as a lab assistant and later as a research associate with Dr. Derek Styles and Dr. Michael Ashwood-Smith. The pinnacle of her UVIC career was the discovery of a previously unknown natural chemical compound, coriandrin, in cilantro. When her UVIC supervisors retired, Oluna freelanced, surveying botanically interesting areas in BC, Yukon, and Oregon.

Towards the end of the 1990s, Oluna returned to mycology and participated in long-term mushroom studies on Long Beach, Haida Gwaii, and southern Vancouver Island.

She was a founding member of the South Vancouver Island Mycological Society (SVIMS), where she channeled all the energy previously given to the Victoria Natural History Society and Vancouver Island Rock and Alpine Garden Society. In 2004, Oluna started a long-term mushroom survey of Observatory Hill (or Little Saanich Mountain), Victoria, BC. Over almost 15 years, with 40 to 50 visits annually, she identified about 1,450 fungal species in an area of about 75 hectares. Her collections are well-documented with her drawings and are deposited in the UBC herbarium. For more information about Oluna and Adolf's work at Observatory Hill, please see https://goert.ca/macrofungi-observatory-hill/.

Mycological experts have described new species based on her collections, and named Cortinarius ceskarum and Inocybe ceskae in her honour. Oluna and Adolf joined Foray Newfoundland and Labrador in 2014 and 2015 at Killdevil Camp at Gros Morne National Park, and in 2017 for the Corner Brook area foray. Oluna was always a cheerful and helpful mycologist in the field, and aided many participants with their identifications once we returned to the lab.The UBC Oluna and Adolf Češka Award in Mycology honours the work of these dedicated biologists.

Shutdowns caused by COVID-19, and the diagnosis of an aggressive form of cancer, ended Oluna's remarkable Observatory Hill research project in 2020. Oluna died on November 9, 2022, in Victoria, BC, and she is greatly missed.

NAMA Memorial Scholarship Recipient Ben Lemmond

by Bruch Reed, Chief Operating Officer

The NAMA Memorial Scholarship was established to commemorate an amateur or professional mycologist designated annually by the NAMA Board of Trustees. The award consists of a $2,000 grant to a graduate student in mycology on the basis of scholastic merit, research ability and promise shown as a mycologist. The student is selected and administered by the Mycological Society of America (MSA). Recipients are invited to present as speakers at a NAMA Annual Foray and to contribute an article to our scientific journal *McIlvainea*.

The 2022 recipient of NAMA's Memorial Scholarship, administered through Mycological Society of America (MSA) and this year awarded in honor of Oldriska "Oluna" Czeska, whose biography appears on page 28 of this *Mycophile*.

Ben Lemmond is a PhD candidate in Matthew Smith's lab at the University of Florida, where he studies the biodiversity and ecology of truffle fungi. Ben is originally from Charlotte, North Carolina, and developed a fondness for the natural world from an early age through frequent backpacking adventures in the southern Appalachians and sailing in the coastal waters of the Carolinas. He first encountered academic biology as an undergraduate student at The Evergreen State College, and later pursued a M.S. degree in Plant Biology the University of Vermont in the Field Naturalist program. Ben hopes that his PhD work will provide some new insights into the ecology, evolution, biodiversity, and cultivation potential of North American truffles.

How did you become interested in mycology? What is your earliest experience of mushrooms, foraging, etc? Was there one person who inspired you? How did you come to focus on mycology as an area of graduate study?

Like many people, I first became interested in mycology through foraging (especially for morels!), hobbyist cultivation of edible mushrooms, and a general curiosity about fungi and their biology. Then, during my graduate studies in the Field Naturalist M.S. program in Vermont, I started to have more questions about the role of fungi in forest systems, particularly ectomycorrhizal fungi and their close association with many of the dominant tree species in New England. It stood out to me that fungi were never included in our approach to characterizing the ecological functions of landscapes and prioritizing areas for conservation. During this time, I started to read more about mycorrhizal fungi, and decided I wanted to dive a bit deeper into this topic for my PhD studies.

What is your specific focus of study? What are you working on? I know you are working on your graduate thesis; what is its focus?

I study the ecology, biodiversity, and cultivation potential of North American truffles, primarily *Tuber* spp. and truffles in the Morchellaceae family. My research includes describing new species, testing hypotheses about the trophic modes of certain groups, and investigating patterns of truffle evolution

(divergence times, comparative genomics, biogeography, etc.). I also work with North American truffle growers and organizations such as North American Truffle Growers Association (NATGA) and the North American Truffling Society (NATS), and try to engage truffle growers, collectors, and enthusiasts in my own research.

What can you tell us about your future goals in mycology?

I love working with truffles, and hope to continue research in this field in the future. I hope to do post-doctoral studies in some aspect that relates to and expands my experience working with the evolution and ecology of truffle fungi and their relatives, or ectomycorrhizal fungi more broadly. After that, I would love to teach as well as continue my research.

In Remembrance of NAMA Institutional Trustee Dr.Tom Volk

We received so many graceful and heartening remembrances of Tom Volk that we decided to share them simply. Some have been edited lightly and some untouched.

On November 28 of 2022, Tom Volk, Professor of Mycology at the University of Wisconsin-La-Crosse, died at the age of 63. There are many great mycologists, among them many legendary teachers, but few in our time carried as high a profile as Tom Volk. Early on, he appreciated the potential of the Internet as a teaching aid: Tom Volk's Fungi became one of the first comprehensive web sites of fungal knowledge, accessible to the layman. In my own early years of growing interest in mushrooms, this site, particularly the popular Tom Volk's Fungus of the month, became one of my regular sources of information. Tom was as approachable as he tried to make mycology. One day, several years before the birth of *Omphalina*, after something caught my curiosity, I wondered if I, too, could make a contribution to that page I had read so often. I wrote to Tom and asked whether I could send him a mushroom story. He did not know me, I was not one of his students, or a well-known moon in the star- studded mycological firmament, but he welcomed my effort with a warm heart (I later learned this was his transplanted heart, his for a mere year at the time). We wrote it up and he posted it. At the end of the piece he wrote that I live in Newfoundland, and closed with, "I hope to make it to the Newfoundland annual foray someday."

Tom was as good as his word. Two years later, 2009, when his new heart had been beating in his breast for three years, he was part of our faculty

in Lion Max Simms Camp. If you were not there, you can look for his pictures in the 2009 Foray Report (2009 was before *Omphalina*). He is easy to recognize, just look for the man with a small goatee, a blue lock of hair and shoulder-to-wrist tattoos. If I remember right, they depicted mycelium. ….

Rest in peace, Tom. You have made this world a better place. – **Andrus Voitk, Foray Newfoundland and Labrador** **http://www.nlmushrooms.ca/**

The mycological community was deeply saddened to hear of Tom Volk's passing away, at age 63, on November 28. Many thousands of students and fans mourn his death. Tom had a storied career. He also endured a lifetime battle with numerous illnesses; in 2006 he had a heart transplant and often referred to himself as "the professor with two hearts."

Thomas J. Volk was born January 28, 1959, in Girard, Ohio, to Thomas Ivan and Rose (Criscione) Volk. He traveled from northeast Ohio to the southeastern part of the state to attend college at Ohio University, in Athens, where he graduated with a degree in botany. Tom got his PhD from the University of Wisconsin in Madison where he studied with Tom Leonard. Volk is of course well known for his research on mushroom-producing fungi like *Morchella*, *Armillaria*, and *Laetiporus* species. But it's interesting to note that Tom's original doctoral thesis project was with the genetics of *Schizophyllum*. (Volk's mentor, Tom Leonard, a world-famous mycologist in his own right, post-doc'ed in the legendary Raper Lab where mycological genetics were pioneered using *Schizophyllum* as a model.) After three years, Volk switched his doctoral thesis work to study morels. His thesis, completed in 1988, elucidated the life cycle for *Morchella* using cell biology and genetics, and was titled "Experimental Studies on the Morel." Following completion of his PhD, Volk remained in Madison where he did postdoctoral research at the Forest Products Lab for several years with mentor Hal Burdsall. Tom Volk was hired by the University of Wisconsin-La Crosse in 1996, where he spent the rest of his career as a faculty member of the Department of Biology. Tom was a very popular lecturer, teaching courses in mycology and plant biology, as well as Latin and Greek for Scientists.

Tom Volk was praised for his teaching skills and wonderful demeanor by everyone fortunate enough to have been in his presence. He was a longtime member of academic as well as nonacademic mycological societies including the Wisconsin Mycological Society (WMS) and the North American Mycological Society (NAMA); he was past-president and a Fellow of the Mycological Society of America (MSA). Tom was the recipient of many awards, including MSA's "William H. Weston award for Excellence in Teaching Mycology" (2003) and NAMA's "Lifetime Contributions to Amateur Mycology" (2005), the society's highest honor.

I first met Tom some three and a half decades ago while a doctoral student at Penn State. Volk traveled with his postdoc mentor, Tom Leonard, to Penn State where Leonard was to give a lecture in the Plant Pathology Department. Afterwards we kept in touch and it may have been from Tom that I first heard about, and decided to join, NAMA. Tom was always a fixture at annual NAMA foray – health permitting – and, along with Gary Lincoff, was a favorite lecturer. We all will miss his mycelial tattoos (shown here in 2017 with WMS member Liza Wallner at the NAMA Annual Foray in Wisconsin). We will miss his blue (although sometimes pink) hair.
And we will miss his infectious smile.
–**Britt A. Bunyard**, published in FUNGI Magazine, volume 15 no. 5.

“He was a great mycologist and teacher, and a nice guy.” — **Greg Thorn**

Dr. Tom Volk was a beautiful human and mycological giant who, among other titles, served for many years as NAMA Institutional Trustee. Besides his towering academic legacy, Tom is known to many NAMA members for his patient, brilliantly insouciant (yet academically rigorous) teaching style, which he was ever eager to share at any time, with anyone. As we head into another mushroom season, we must raise a collecting basket to Tom and all our dearly departed Pantheon of the Learned who, like him, made the mycological most of their precious, too-brief time. May he rest in power and peace amid endless, resplendent fields of fungal fruitings. – **Bruch Reed, NAMA Chief Operating Officer**

It is with deep regret that we report that Prof. Tom Volk of the University of Wisconsin passed away on November 28, 2022,at the age of 63. He had been in ill health for several years. A prominent figure worldwide throughout the field of mycology, Dr. Volk was a fascinating individual widely admired for his exceptional teaching ability, modesty, compassionate nature, and last, but not least, his keen sense of humor. Mycologists, both professional and amateur, were always welcome to attend any of his lectures. He was able to travel extensively and gave lectures or workshops in 32 different states. For 26 years he was a professor in the Department of Biology at the University of Wisconsin-La Crosse, where he taught courses on General Mycology, Medical Mycology, Organismal Biology (with Greg Sandland), Plant-Microbe Interactions, Advanced Mycology, Food & Industrial Mycology (with S. N. Rajagopal), Organismal Biology, and Latin & Greek for Scientists, as well as Plant Biology. Rest in peace, Tom, you will be greatly missed. – **Agnes Sieger,** BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY Number 588 January 2023

Dr. Volk graciously invited me, a citizen naturalist mycophile with no science training, to audit his Intro to Mycology class in 2015. I met him in 2009 and was captivated by his ability to make the most complex ideas seem accessible to people like me. My article on that experience was published in the NYMS spring 2016 newsletter. As you create your tribute to Dr. Volk, I am happy to submit a copy of that article for inclusion. Or if you prefer, I can rewrite my account of that life-changing experience. Thank you for all you do for Mycology.
JJ Murphy, The Joyful Forager
jjmurphy@thejoyfulforager.com

We have lost a wonderful and unique person. I remember Tom was at a Boston Mycological Club walk in 2013 when a young woman approached him and said that she, too, was a heart transplant recipient (imagine that!). She had come to meet him and to ask him, as a fellow immuno-compromised person, if he was concerned about the risks of plunging through the woods with the dangers of ticks, etc., and of eating mushrooms. He was so thrilled to meet her. Everyone could see that they had a special connection. He told her that she could do whatever she wanted to in her life just as he had always done. – **Ellen Penso**

In our younger years, my wife and I went to many NAMA annual forays. During those years we met Tom Volk and I always managed to have a chat. He was always friendly and very informative. We would always make sure to be at his talks. In 2003 we decided to go to the NAMA foray in Quebec. We planned to drive and see the country with the intention of doing some local foraying. Tom Volk offered us the opportunity to look at mushrooms in the La Crosse woods. We had a pleasant day walking with him and a couple of his students and discussing the mushrooms we found. We knew Tom had serious heart issues, and sometimes around that time he was able to get a heart transplant which has served him well for many years. We are glad he got that extra chance.
– Igor Malcevski
Snohomish County Mycological Society

I just heard that Tom Volk passed away today. I'm so sorry for everyone's loss. Just think of how many people he touched in his 63 years on the planet, and the health struggles he endured. We were blessed to know him. – **Kathy Yerich, NAMA Marketing Committee Chair**

My "Magic" Mushroom Mistakes

By Dave Layton

When I learned that Eugenia Bone would write an article about a book on cooking psilocybin mushrooms, immediately the curmudgeon in me thought, I hope nobody cooks their brains and blames us*. Actually, I'm excited to read anything Eugenia is willing to share and I understand that the book may help people know what is a proper dosage for specific purposes so they don't cook their brains.

Still, the thought of cooking *Psilocybe* mushrooms reminds me of a party in my late teens where I had one too many pieces of "magic mushroom" pizza. To be honest, nothing bad happened. I just didn't move much for four hours. The experience was intense. I really needed a guide. So I'm a bit leery and I will neither advocate nor condemn. I will, however, share some stories of my ongoing quest for wild "magic" mushrooms in all the wrong places.

I hadn't started studying mushrooms when I watched my friend Bill eat several large, colorful, blue-staining mushrooms. I told him they didn't look right, but he replied correctly that there are lots of different kinds of Psilocybes and besides, "they taste good." He didn't get high or poisoned – sheer dumb luck. They were likely edible bi-color boletes (*Baorangia bicolor*), but he would have devoured them just as quickly if they were poisonous Satan's boletes (*Boletus satanus*). Bill even drank gasoline to get high as a kid so, who knows, he might have liked Satan's boletes better. I should report that he's alive, sober and healthy fifty years later.

The photos accompanying this article were taken by Jim Frink. More of his photos can be viewed at: http://www.iowamushroom.org/Frink.php

I began studying mushrooms in my twenties. My main interest in fungi was finding them as a food source, but the holy grail of finding hallucinogenic species here in Iowa always lurked in the back of my mind – occasionally making it to the front. In my last article I mentioned eating dozens of haymaker's mushrooms (*Panaeolus foenisecii)* because I read that they might contain psilocybin. They didn't. The bellyache that ensued wouldn't be my last.

When I first identified *Gymnopilus (spectabilis) juonius*, I also learned that eastern strains may

be psychoactive and that in Asia it was called “big laughing mushroom.” That was enough info. for me to try it. I had one bite – nope, two bites – nope, three bites – nope, half a large cap – oh boy! This bellyache was a doozy and the only laughing was my friends laughing at Me.

All my magic mushroom mistakes weren’t about eating mushrooms that I shouldn’t have. There’s “the one that got away,” too. I’d given up looking for psilocybin-containing mushrooms in Iowa, so I didn’t even think about it when I found *Pluteus (salicinus) americanus* with a blue-staining stem. I learned much later that the blue stem likely meant the presence of psilocybin. Dang; if I knew then what I know now I might have finally found my holy grail. I haven’t found the species in the twenty-plus years since then, but I still make sure to check out every little *Pluteus* I find. I have more hope for success in the future too. Wavy caps (*Psilocybe cyanescens*) have been reported in Ohio, not that far south from Iowa. Climate change may bring them here, even as it destroys the rest of the planet.

Lately, I’ve rethought experimenting with *Amanita muscaria*, which I had previously considered to be too poisonous to mess with. Specifically, I’ve begun boiling it to convert ibotenic acid into muscimol. You may already have guessed that my magic mushroom mistakes aren’t completely over. You’re right. Maybe at some point I’ll report more completely on my experiments with a local patch of *Amanita muscaria* var. *guessowii*. For now, I’ll just say that the first concoction I made from boiling sauerkraut juice with the fungus seems to be better for cooking bratwurst than cooking brains. That’s probably a good thing, for, as you may have surmised, I really don’t need another way to get stupid.

**The article to which Dave refers is published on p. 49 of this issue.*

Fungal Diversity Survey: Passing the Torch

by Bill Sheehan

Linking community (citizen) science and fungi through what was the North American Mycoflora Project, Inc., and is now Fungal Diversity Survey, has been my world for the past seven years. I put together a scrapbook as a record of my time leading this grand community science vision. The scrapbook, Fungal Diversity Survey: The Early Years, is a personal account of the origins and evolution of the nonprofit organization that was incorporated in 2017, and of what our community accomplished during the ensuing four years while I was President of the Board of Directors, through 2021.

2012

The original idea for creating a "mycoflora" for all macrofungi in North America came from mycologist (and NAMA Institutional Trustee) Tom Bruns of University of California Berkeley and others. It was the subject of a day-long workshop in 2012 at a Mycological Society of America meeting at Yale University. It was attended by about 70 individuals, mostly professionals but with leading amateurs as well. Bruns used the cheeky tagline, "Without a sequenced specimen, it's a rumor."

After the workshop, the original North American Mycoflora Project stalled. Someone calculated that at the current rate of new species discovery (several dozen per year in North America), it would take professionals 2,000 years to create the mycoflora. The estimated cost for professionals to *start* creating the mycoflora was projected to be $18 million over 10 years. There was little hope of getting that kind of money. In fact, no funding was acquired and not much happened for 5 years.

2016

I did not learn about the Yale workshop until four years later. Originally trained as an insect ecologist (PhD, Cornell), I only became fascinated with fungi around 2013. In 2016 (after retiring from two decades running nonprofit organizations), I took a three-week course with Duke University mycologist (and NAMA Institutional Trustee)Rytas Vilgalys at Mountain Lake Biological Station. It was magical. It was there I learned about the growing field of citizen science and about the 2012 workshop.

I saw the need for organizing citizen scientists to achieve the ambitious goals of the Yale workshop. So I conducted a survey of mushroom clubs that documented considerable individual interest in sequencing and vouchering mushrooms, but no coordination (published in *The Mycophile*). Later, I described my vision for "crowdsourcing fungal biodiversity citizen science" as a four-tiered model.

Several months after the Mountain Lake course I met Steve Russell, a brilliant amateur mycologist, at the 2016 NAMA Annual Foray in Shenandoah National Forest. We were thinking along the same lines. He was immersed in DNA sequencing and had been developing a platform to engage amateurs.

2017

Some colleagues and I organized a full-day workshop for 34 citizen scientists and professional mycologists in Athens, Georgia, in conjunction with the annual conference of the Mycological Society of America. Rytas Vigalys put out the word to his academic colleagues and Tom Bruns

co-chaired the meeting with me. We called it Mycoflora 2.0 to signify that we aimed to reboot the dormant Mycoflora Project. The focus of the Athens workshop was citizen science: "How to make it easy and cheap (or free) for amateurs, working with professionals, to document, voucher and sequence fungal specimens."

At the 2017 workshop, I organized a small side meeting at which the decision was made to incorporate as a 501(c)(3) nonprofit called **North American Mycoflora Project, Inc (NAMP).** The initial board of directors was comprised of Stephen Russell, Alija Mujic, Christian Schwarz and myself.

Projects and Barcoding

NAMP, Inc. aimed to empower amateurs to contribute to fungal science by making DNA sequencing (also known as barcoding) accessible to amateurs and as cheap as possible. We did this by providing grants to amateurs. The fund was launched with $40,000 from NAMA, MSA and Paul Stamets, and by the end of 2021, an additional $60,000 was raised from individual contributions and from paid DNA sequencing. The great majority of funds went towards grants for DNA barcoding of specimens collected by amateurs.

DNA sequencing was initially done pro bono by Stephen Russell and by the academic labs of Todd Osmundson and Rytas Vilgalys, with results posted by Stephen on https://mycomap.com/projects. The volunteer model proved problematic, so in 2020 we switched to Barcode of Life Data Systems (BOLD) in Guelph, Ontario, for DNA extraction, amplification and sequencing. Time-consuming vetting of results was done by mycologists Jean Lodge and Bitty Roy during 2020 and 2021, assisted by several amateurs. The scrapbook includes documents detailing results of FunDiS projects. All told, some 8,000 fungal specimens were documented, vouchered and sequenced by citizen scientists.

Before submitting specimens for barcoding, participants had to register local projects. As of December 2022, amateur mycophiles had registered 213 local projects across North America. Most projects are not currently active, in part because funds expired for sequencing grants.

Keeping track of 200 local projects and thousands of sequencing grants, payments, specimens, observations and results was a herculean task. We were fortunate to have Joanne Schwartz on the team. She has an eye for detail and an incredible capacity for tracking (in static spreadsheets) the many moving pieces of the FunDiS operation. In fact, Joanne and I (Vice President and President, respectively) managed much of the day-to-day operations of NAMP and FunDiS from 2019 through 2021 and remained on the Board of Directors during 2022 as resources to the new team (Gabriela D'Elia, Director; Ken Buegeleisen, President in 2022, Adam Demartino, President in 2023).

The volunteer model ultimately proved unsustainable for running a continent-wide sequencing operation. We lacked the capacity and technical infrastructure adequately to service projects (especially for beginners), coordinate with external organizations, and do fundraising. In mid 2021 we concluded awarding new grants since we had used up allocated funds, as well as suspended the paid (subsidized) sequencing program. Projects concluded submitting samples by the end of 2021. FunDiS continues to target limited funds for sequencing rare and threatened species, and those from threatened habitats, in line with a commitment to fungal conservation.

FunDiS: A New Day

Early in 2020 we started exploring how to narrow the organization's focus to have more impact and relevance. We decided to focus on fungal conservation. We recruited fungal conservation expert, Greg Mueller, to the Board and established a Conservation Working Group of experts and amateurs around North America to guide our path forward.

We also decided it was time to declare independence from botanical nomenclature like "mycoflora." After much discussion within the myco-community, in a branding process ably orchestrated by Board member Sigrid Jakob, we settled on Fungal Diversity Survey, or FunDiS for short. In

Early Days

August 2020 we unveiled our new name and new website, www.fundis.org. As part of the new focus on fungal conservation, we launched a West Coast Rare Fungi Challenge and a fungal Diversity Database, again guided by Sigrid.

In late 2022, FunDiS received its first substantial grant. The grant is from the California Department of Food and Agriculture, through Dan Gluesenkamp of the California Institute for Biodiversity, based on talks with Dan during 2021 by Bill, Joanne Schwartz, Greg Mueller and Ken Beugeleisen. $309,000 was committed for the first year to support barcoding and vouchering of 3,800 specimens by community scientists, as well as to allow hiring of staff.

I feel privileged to have gotten to know and spend time in the field with so many passionate mycophiles. The organization has depended on the generosity of hundreds of volunteers who spent thousands of hours in pursuit of the vision of citizen scientists documenting fungi. The future looks exciting for the Fungal Diversity Survey. I wish the leaders and participants the satisfaction I have experienced, and hope FunDiS is successful in making the link between documenting and protecting fungi.

Mycophagy

Breaking The Mold by Making Koji

by Joey "Mycæl" Hafley

Have you ever wondered what makes soy sauce taste so delicious? How about other Asian favorites like miso paste, sake, mirin and more? To get to the bottom of those, you must start with the ancient and remarkable fungi responsible for the transformation of the base ingredients of all of them, *Aspergillus oryzae*, or as it is more commonly known, Koji.

What is Koji?

Koji is a filamentous fungus in the Ascomycota mold division of the Kingdom of Fungi. This amazing mold is in the same genus as *Aspergillus niger*, more commonly known as black mold. Not to worry; though it shares the genus with black mold, koji is far from the musty and dank basement dweller we've all shuddered to encounter.

The precise origin of koji for culinary use is unknown; experts generally agree that it most likely happened in China thousands of years ago, around the same time as the discoveries of other fungal marvels such as beer, bread and other fermented products we love. However it was first discovered, its use led to the remarkable feat of selective domestication of the desired strains, especially the albino strain. Contaminants will not grow in the albino's white and fuzzy strands.

How does it work?

The preferred host of koji is cooked grain left in a warm and humid environment in which it can thrive. The koji fungus produces fungal digestive enzymes on the host substrate. These enzymes break

down complex carbohydrates, polysaccharides, proteins and in some cases lipids into simpler forms so they can be used as food for the growing fungi. This process does not only help the fungus. The breakdown of the complex to the base-nutrient components causes them to become more bioavailable. Thus, we expend less energy to digest, giving us more for less effort. From a culinary standpoint, an even more useful and exciting koji trait is that it produces and enhances flavors and aromas in ways that are otherwise unattainable or less noticeable.

Here's the Beef!

Koji's traditional uses are becoming more common and better understood in the Western world. The spread of this mold to the kitchens and food labs across the world and particularly in the U.S. has led to some exciting and innovative new applications. The use of koji spores to cure meat is one of the most exciting of all!

The most common methods for aging meat (beef as the primary example for the purpose of this article), are wet aging and dry aging. Both techniques involve hanging the beef in specific environments for a time to develop flavor, texture and meet demand. Originally, aging and curing meat allowed people to store it longer before it spoiled. Today, most of us eat dried or cured meats for enjoyment.

Whether wet aged or dry aged, the process involves hanging whole butchered animal or large "primal" cuts in a refrigerated location at a specific humidity and temperature for an amount of time determined acceptable by food-safety agencies such as the FDA and USDA. The processes are wasteful and costly. For example, for beef to be labeled "dry-aged," it has to hang for at least 45 days. During this time, the weight of the meat will decrease by up to 30% from water loss. In addition, 50% of the meat will be cut off due to desiccation and unpalatable mold.

Koji changes this losing game. Create a rub by following a simple ratio of 2% of the weight of the meat with a salt and sugar mixture; apply and allow to stand for 30 minutes. Rinse and pat dry. Then apply the same ratio of 2% spores to weight of meat. Disperse the spores in rice flour and/or cornstarch until enough to fully coat all the meat. If you create or purchase a chamber with the ability to keep the meat at approximately 80 F and 90% relative humidity (Rh), you can do it at home.
The clear choice for cost-effective, efficient, and environmentally friendly dry-aged beef is koji. The time required to attain quality meat is between 36 and 42 hours. The reduced energy cost of the minimal heating and humidity required for koji-aged beef is a fraction of that for large scale refrigeration and produces none of the chlorofluorocarbons that refrigerant does. The waste percentage is reduced to nearly 0%. Even the outer layer of mold encompassing the meat is an advantage: it's not only edible and safe but develops a unique and desirable crust when being grilled or otherwise dry cooked.

To learn more about what you can do with koji, read *Koji Alchemy* by Rich Shih and Jeremy Umansky. You will find descriptions of the origins, history, life cycle, and uses of Koji as well as recipes, instructions and diagrams for several fermentation chambers you can build at home.

Editor's note: I reviewed *Koji Alchemy* in the November/December 2020 issue of *The Mycophile*. https://namyco.org/docs/The_Mycophile_60.6_NovemberDecember_2020.pdf

Mycological

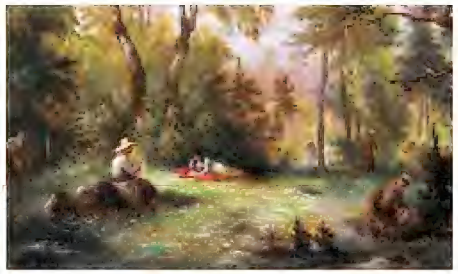
Announcing NAMA Book Club

by John Michelotti

The story of the genesis of the NAMA Book Club came from the deliverables of being Chair of the Medicinal Mushroom Committee and having to submit book reviews for the *Mycophile*. I figured a mushroom book club would help me meet my goals of reading more myco-books and also inspire me and others to write reviews. The original idea I proposed during the quarterly NAMA committee meeting was to have each NAMA committee choose a book and host the book club on a rotation. When Eva Gordon offered to be the main host of the book club, with her experience of hosting book clubs in the past, it was an easy win.

The NAMA Book Club is inspired by the authors who are expanding our understanding of fungi,combined with the impetus to share these ideas with other mycophiles.

Avery Stempel of Collar City Mushrooms started a local, in-person mushroom book club and I was inspired to bring that idea to NAMA to share books with a national audience of mycophiles through this virtual book club. If we are lucky, maybe a few authors will be willing to join the zoom to share about their writing experience and answer some questions. This book club is not meant to have one main speaker, however, but to act more as a roundtable discussion by NAMA members focused around mycological topics pertaining to the book of the month. I hope that the NAMA Book Club encourages members to listen and reflect upon ideas together, to broaden our understanding and wonder for the fungi. It may also provide regular attendees with some justification to expand their library to contain far more mushroom books than any reasonable person should acquire.



Members are also encouraged to write book reviews and submit them to be published in the *Mycophile* (Bruch Reed is now *Mycophile* Book Review Editor and can be emailed at coo@namyco.org). NAMA Book Club will meet every 3rd Thursday of the month at 7pm ET for 1 hour. Following is the schedule of upcoming sessions:

Date	Host/Affiliation	Book	Author
March 16	John Michelotti	*Medicinal Mushrooms: The Human Clinical Trials*	Robert Rogers
April 20	John Michelotti	*The Lives of Fungi*	Britt A. Bunyard
May 18	Eva Gordon	*Entangled Life*	Merlin Sheldrake
June 15	Trent Blizzard	*Fruits of the Forest*	Daniel Winkler
July 20	Eva Gordon	*Slime: A Natural History*	Susanne Wedlich

Mothering the Mushrooms: Reading Suzanne Simard's *Finding the Mother Tree: Discovering the Wisdom of the Forest*

Book Review: by Barbara Ching, Mycophile Editor, Past President
Finding the Mother Tree: Discovering the Wisdom of the Forest
Knopf (2021)
384 pages

"For generations, my family has made its living cutting down forests… I have cut down my fair share of trees as well." – Suzanne Simard

Suzanne Simard's *Finding the Mother Tree: Discovering the Wisdom of the Forest* has changed the way I think about mushrooms and especially about mushroom "hunting." In fact, *it's the most important book I've ever read on the subject.*

From the first lines, cited above, *Finding the Mother Tree* engages the reader with what is in fact a fierce argument.The book's title announces the forest as the realm of wise women. We're not talking about hearty lumberjacks like Paul Bunyan or weathered hags like Baba Yaga, it says. We're talking about Simard's grandmother, her mother, herself as a mother, and nature as the mother we always say it is. We're also talking about the biggest and oldest trees in the forest. Simard tacitly assigns them the pronouns she/her. The dedication, to Simard's two daughters, and the epigraph drawn from Rachel Carson – "Man is a part of nature, and his war against nature is inevitably a war against himself" – reinforces the importance of Simard as the mother narrator (she/her). Women go about things differently.

Finding the Mother Tree braids three dominant themes: the struggle of a gifted woman to succeed in a male-dominated and profit-driven field, the story of her hugely significant success, and the candid story of the same woman's life as a daughter, sister, wife, mother, divorcee, cancer survivor, and finally as an aging woman partnered with another woman.This complexity distinguishes the book from two similar books by women scientists, Hope Jauron's *Lab Girl* and Robin Wall Kimmerer's *Braiding Sweetgrass.*The contrast with these two books also underscores the sole weakness I can point to in *Finding the Mother Tree*: Kimmerer and Jauron describe their experiment designs with more verve. Simard provides more detail.

Through carefully designed, reproducible studies set in British Columbia's forests, Simard specifies *how* mycelium and mycorrhizal fungi work as the "mother tongue" of the forest.These strands build networks between trees, allowing the oldest trees to discover which younger trees are struggling for nutrients. And then the mother trees provide for them. More importantly, Simard discovers that "the network is pervasive through the *entire* forest floor, connecting all the trees in a constellation… The biggest, oldest timbers are the sources of fungal connections to regenerating seedlings." The most stunning discovery of all is that this tree behavior "has similarities to our own human brains. In it, the old and young are perceiving, communicating, and responding to one another by emitting chemical signals. *Chemicals identical to our own neurotransmitters. Signals created by ions cascading across fungal membranes…* These old trees are mothering their children" (5).

As she expands her work, Simard uncovers how Indigenous people before her also engaged in

careful observation and ingenious collaborations with the mother trees. Simard even comes to see herself and others as mother trees, and trees as living beings, in a continuum with the mother bears she occasionally encounters as she pursues her work in the woods. But Simard's curiosity and passion does what bears and trees cannot do: she doesn't scare us; she feeds us her fierce commitment to forests in a way that adds significance and caring impulses to our own time in the woods.

The complexity and length of the book may be off-putting to some readers but since it is so worth reading, I offer some advice about what helped pull me into the book and get me to the "can't put it down stage." First – there are pictures! – many of them of mushrooms, and lots of them of Simard's family members. In the paperback edition, these pictures are not well reproduced, so get the hardcover from your public library. Reproduced on good paper and in color, the photographs and their captions add a lot of interest and foster understanding. In addition, I did some road-trip "reading" by listening to a few chapters in the audiobook (also from the public library.) Simard reads it herself, and her soft-voiced, Canadian-accented performance heightens and authenticates the many emotions generated by her struggles and triumphs. Long stretches of road make listening attentively very easy. You most likely have some low-demand driving that you must do now and then. Ride with the mother trees!

Force yourself to get as far as Chapter 7, "Bar Fight," where Simard discovers that life in a human family is more complicated than a circle of nurturing trees. This chapter's contrasting settings, an academic forestry conference and a cowboy bar, and its excruciating denouement, will pull you all the way into the story.

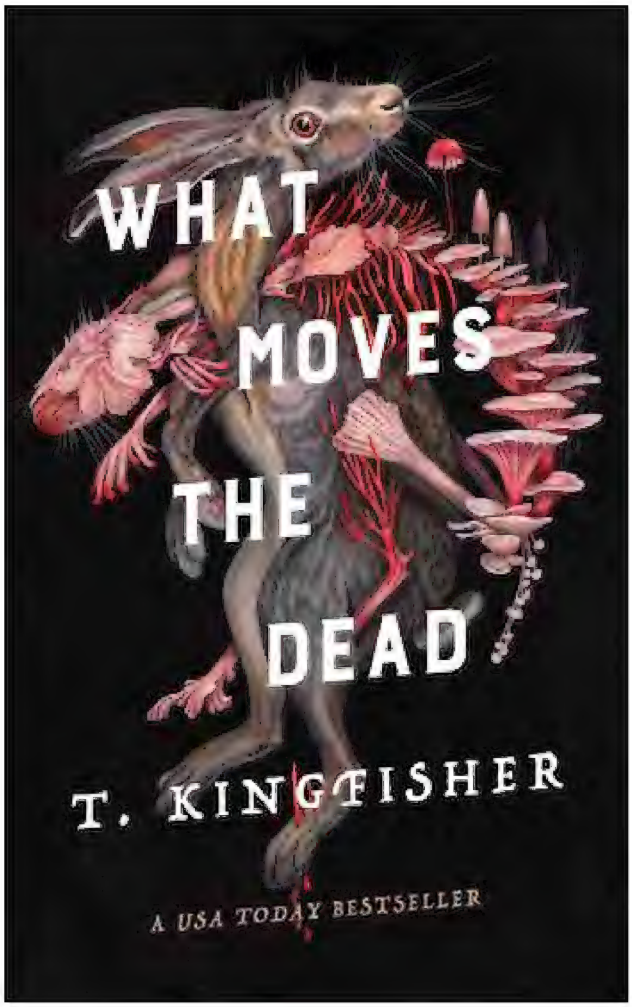
Simard's male colleagues were both dismissive of and threatened by her findings that demonstrated how the logging industry's clearcutting and replanting methods were ineffective, even damaging. They called her "Miss Birch," a mere letter away from what Simard suspected they meant (206). No wonder she found presenting at professional gatherings especially intimidating. However, when one such gathering was scheduled in Williams Lake, B.C., near her brother Kelly's ranch, she looked forward to meeting with him after her presentation. Of course, it had been followed by the usual skeptical, hostile questions. Understandably rattled and thirsty, she arrived at the designated cowboy bar, breathing in "stale beer and cow shit" as she waited for her brother, only to hear him make an objectionable remark about the need to handle cows like women (136). Ever the scientist, she wryly explains that when confronted by his sexist comments,"my amygdala firmly hijacked my prefrontal cortex" (139). But the bar fight and hangover that ensued, and the heartbreaking memories that endured, left this battle of the sexes painfully unresolved. Find out what happened.

If the book still sounds like too big of a time investment, know that one day you will be able to see the movie. Amy Adams will produce and star. Really. But I'll bet you almost anything that the book will be better than the movie.

The implications of Simard's findings helped clarify much of what I dislike about mushroom "hunting" culture, and make sense of my increasing reluctance to collect big "hauls." I keep hearing passive aggressive jokes about secret mushroom spots built on the assumption that mushroom spots are private property, that the whole mushroom-producing ecosystem can be owned and disposed of as you please, and that skilled mushroom "hunters" assert dominance. In this mode, we are not so different from the lumber companies who claim and maim the forests. After reading Simard's transformative book, I'll spend as much time in the woods as ever but I'll "cut down" fewer ectomycorrhizal mushrooms.To play a bit with Simard's opening statement,"I've (already) cut down my fair share."

I've already made enough work for the mother trees.

Long live the mother trees!



Book Roundup: There's a Fungus Among Us: The Literary (Re)Surgence of Mycelium
by Bailey Sterk

Mushrooms grow in dark, moist places, full of rot. They are among the first organisms to arise after death; they function as a part of the decay process. They also have long sprung up from the pages of gothic horror novels – inevitable presences in decrepit haunted houses.

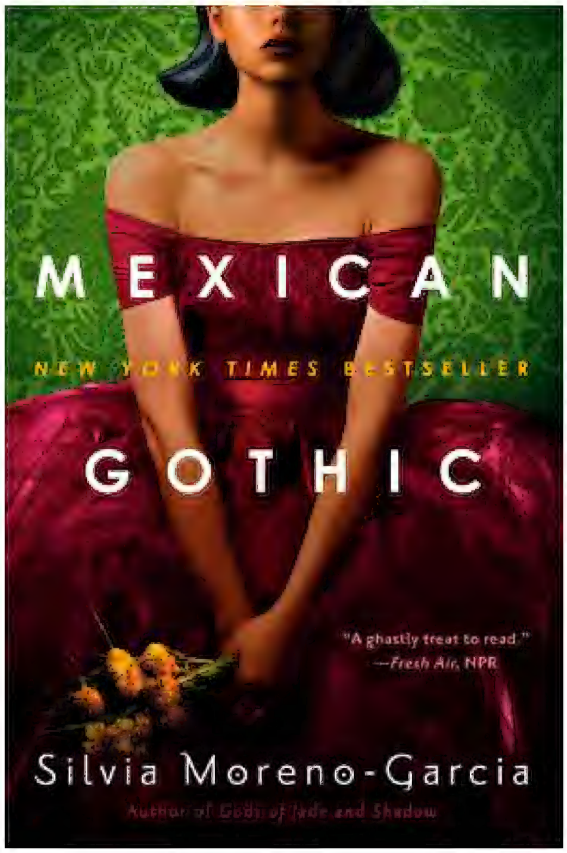
One fungus (in real life, not in fiction) takes over the brains of ants and can infect whole colonies: *Ophiocordyceps unilateralis* (commonly known as the "zombie-ant fungus") is the stuff of science fiction and apocalyptic tales, yet we coexist with these disturbing realities all the time. Most importantly, this fungus inspired the popular video game *The Last of Us*, which in turn inspired the television series. Real or imagined, fungus remind us that our world is incredibly strange and becomes more so the closer we look – generating that feeling of horror, that urge to look away instead of confronting the limits of our understanding.

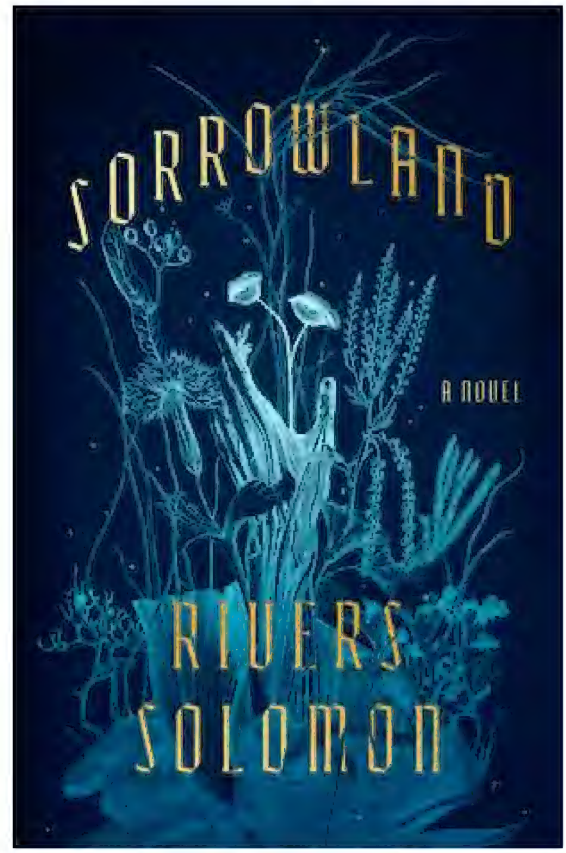
And the urge to look back. Why are we so obsessed with these fungi? Certainly, part of the fascination is the unknown and unpredictable. We may have discovered that fungi are at the heart of many of our eerie maladies, much the same as we've discovered the root of other things that go bump in the night and run, insane, through the attic. But it goes deeper: fungi are capable of many mysterious things since they are unrestrained by the rules that plague us animals. Their requirements for life are death: as Tumblr user "personsonable" noted, "decay is an extant form of life." It persists beyond the beating of human hearts and it can even move the dead.

In recent years, a slew of books, fiction and nonfiction, have explored the ways that fungus lives with us and within us.

In the novella *What Moves the Dead*, T. Kingfisher takes inspiration from Edgar Allen Poe's "The Fall of the House of Usher," a quintessential haunted-house tale, and from Silvia Garcia-Moreno's novel *Mexican Gothic*. Kingfisher's protagonist, Alex Easton, is a gender-nonbinary soldier from a fictional country whose language, Gallacian, has more modes of being than can be translated. Coming to call on their childhood friends, Madeline and Roderick Usher, they meet an odd British mycologist and an American doctor attempting to understand what, exactly, is happening to the House of Usher. All is not as it seems, as possessed wildlife and decaying life all seem to turn towards the lake, which is teeming with life – or something else entirely. Everything seems coated with a white film, including Madeline and the fish that they've all been eating. The rabbits are rather suspect, hopping merrily away after receiving mortal wounds. What is the strange flow emanating from the lake?

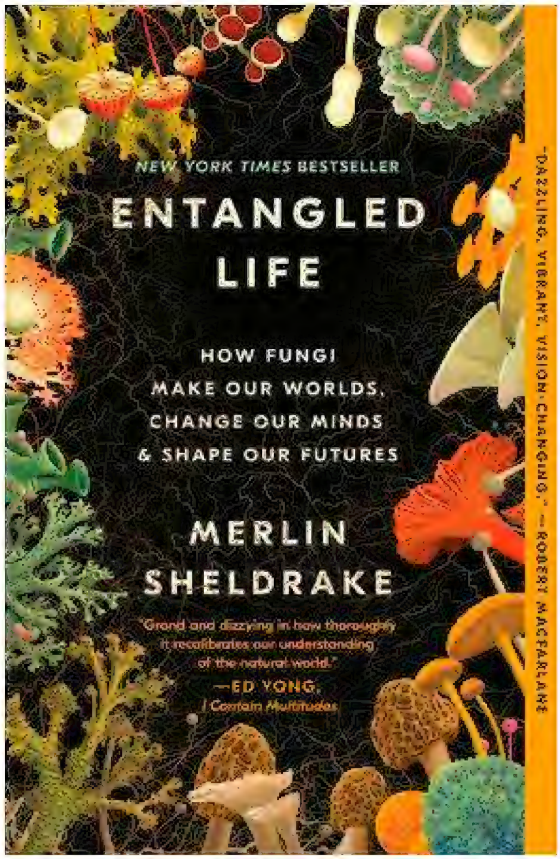
In her author's note, Kingfisher encourages readers to "Seriously, put down this book and go buy [*Mexican Gothic*]," which makes an excellent complement to her own work. Silvia Moreno-Garcia's novel follows Noemí Taboada as she goes

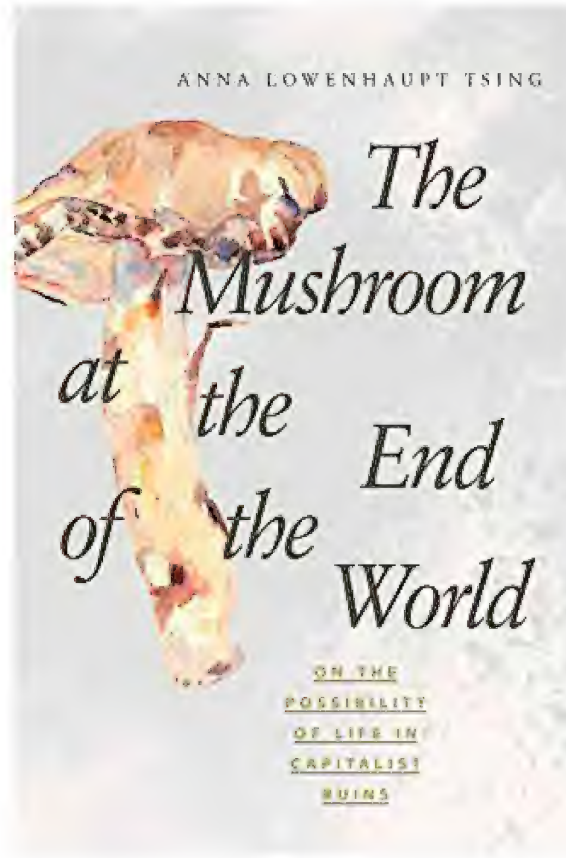




to the estate of her cousin's new husband, from which the cousin had sent a panicked missive begging for help.There is a nod here toward Charlotte Perkins Gilman's *The Yellow Wallpaper* and the tradition of women confined in massive estates for the sake of preserving men's wealth and image (and immortality); it makes one question just what emanated from that wallpaper, which commonly contained trace amounts of arsenic, mercury, and lead). Upon her arrival, Noemí is told by the family's private doctor that her sister is suffering from tuberculosis and general hysteria. Noemí remains unconvinced, and when she begins to experience strange nightmares, she undertakes an investigation.The overbearing matron of the house bans smoking, noise and speaking at dinner, and the decrepit patriarch casts disturbing looks at Noemí when he isn't wailing through the night. The connections between generations of colonial trauma, the disturbing, eugenicist racism of the patriarch, and the isolation of the family estate make for an eerie, disturbing setting in which Noemí tries to determine whom she can trust.

Rivers Solomon's *Sorrowland* is an intense, tragic foray into the world of fungus and of transformation. Vern, fifteen years old and raised in a religious cult called "Cainland," escapes into the woods seven months pregnant with twins. She forges a place for herself and her twins (named Feral and Howling). Eventually, tumultuous transformations and visions impel her to retrieve an escaped childhood friend. Vern has to grapple with the changes that Cainland – and its trauma – wreak on her body that becomes stranger to her every day. A story of survival, *Sorrowland* makes visible the impacts of trauma on the body, both the ways it can make us stronger but also the ways that it makes us incredibly vulnerable.


NEW YORK TIMES BESTSELLER
ENTANGLED LIFE
HOW FUNGI MAKE OUR WORLDS, CHANGE OUR MINDS & SHAPE OUR FUTURES
MERLIN SHELDRAKE
"Grand and dazzling in how thoroughly it recalibrates our understanding of the natural world."
—ED YONG, I Contain Multitudes
"DAZZLING, VIBRANT, VISION-CHANGING." —ROBERT MACFARLANE



Entangled Life by Merlin Sheldrake follows myriad forms of fungus through their hidden life stages. By examining different species, Sheldrake encourages us to re-examine our concepts of intelligence and individuality, a recurring theme in the books mentioned in this article.This nonfiction book invites us to investigate different ways of being in relation with the world around us.

Anna Tsing's *The Mushroom at the End of the World,* another work of nonfiction, connects humans to fungus not only through our oh-so-permeable skin but also through our lifeways and economies of freedom and refuge by looking particularly at the matsutake mushroom, a highly sought-after commodity. Formed as an assemblage of growth and life, *The Mushroom at the End of the World* veers between the history of immigration and refugees in the United States (and globally) and the experiences of those seeking treasured mushrooms in matsutake-foraging camps. Tsing presents a multitudinous examination of the connective tissue of our world and a philosophical examination of what it means to survive and thrive in the wake of capitalist destruction.

Fungi have a remarkable ability to change and grow in the most adverse conditions. Perhaps that is what makes them so interesting to us; do we want to emulate them? Do we want to avoid them? Mushrooms themselves are only the fruiting, visible bodies of the fungal organism, belying the extensive mycelial systems running through plants, animals, and the Earth itself. Fungi comprise an omnipresent structure in our world, if you know how to look. They aren't solely sinister, though they disturb our concepts of the world as we understand it – and thus our concepts of ourselves.They make for rich metaphors that can affirm and threaten our current lifeways, real or imagined.

Perhaps we're looking for new ways to live with the world?

Editor's note: Thank you to Dog-Eared Books in Ames, Iowa for giving permission to reprint this lightly-edited blog post from the November 17, 2022 edition of *Off the Leash with Dog-Eared.* https://www.dogearedbooksames.blog/

Book Review: by Eugenia Bone
The Psilocybin Chef Cookbook
By Dr. K. Mandrake and Virginia Haze
Green Apple Press, 2020
164 pages

On every adult mushroom excursion I've attended over the years, at least one of our party spent a great deal of time retching in the woods. That's the case for many who consume *Psilocybe* species, including one of the authors of 2020's *The Psilocybin Chef Cookbook*. Mushrooms make Virginia Haze sick: "I've come to the point where I feel nauseous just chewing on mushrooms," she said in a phone interview. "I'm interested in eating things I know will work with my trip – not 'tripping balls' – and settle my stomach." Ms. Haze and her collaborator Dr. K Mandrake are merry vegans in their mid 30s, living somewhere in England, and best known for their 2016 cultivation manual, *The Psilocybin Mushroom Bible*. That said, chimes in Dr. Mandrake, "we know people who eat their whole way through a trip. We kind of wrote the cookbook for those who get a bit snacky during the psychedelic experience."

Dr. Andrew Weil has suggested that in uncooked mushrooms, chitin, a largely undigestible component of fungal cell walls, may cause indigestion in some people, and hence nausea.

He's not alone in that idea, but I think it is unlikely chitin is to blame. Chitin doesn't break down by cooking. I mean, fungal cell walls break up, but the chitin molecule doesn't and if it truly made people nauseous then mushrooms in general would be well known for making people feel sick. Rather, psilocybin seems to be the culprit. Even in clinical settings where synthetic psilocybin is used – so no chitin present – patients list a queasy feeling among the symptoms

There are a lot of serotonin receptors in the GI tract, receptors that psilocybin (metabolized into psilocin) affects. "I wouldn't be surprised if the nausea was due to the psilocin directly," said Dr. Bryn Dentinger, a plant biologist and the curator of mycology at the Natural History Museum of Utah. And if it turns out that psilocybin's evolutionary *raison d'etre* is to create antifeedant effects, Dr. Dentinger thinks perhaps the molecule functions as an emetic or laxative to ensure the mushroom spores are expelled before being destroyed by the harsh conditions of an animal's gut.

Anyway, the question of why psilocybin upsets our stomachs remains to be answered, but the fact that it does is well established. For the authors of *The Psilocybin Cookbook*, it's all about finding that balance between getting nutrition, enjoying what Christopher Hobbs calls a "museum dose" (strong enough to have a great time at the museum, weak enough to ensure you don't freak out), and not puking – an unique (and, for a cookbook reviewer like myself, somewhat risky) proposition.

The Psilocybin Chef Cookbook is composed of five chapters; the first covers extractions, which is valuable information for anyone interested in ethanol extraction, psychedelic teas and honey. One recipe is a cold extraction: Paul Stamets' "Ice Water Blue Juice," which is made from no more than fresh *Psilocybe* mushrooms and ice. I wanted to test this one for flavor because raw *Psilocybe* mushrooms have been variously described as tasting greasy and bitter, but they are out of season right now. My colleagues on Shroomery.com, however, say the taste is not so bad, but they mix it with orange juice anyway.

Subsequent chapters follow their own formulae: Drinks, Mains, Desserts, and Sweets, things like lollipops and gummy bears – the homemade versions of what you can get with a church membership at Zide Door, the Church of Ambrosia in Oakland, California. The recipes call for .50 grams dried and powdered *Psilocybe* mushrooms or (in most but not all recipes), 5 grams of fresh mushrooms per serving (pretty much the same ratio as culinary mushrooms).

All the recipes were tested using *Psilocybe cubensis*, the most frequently cultivated *Psilocybe* species. These can vary from 0.3% to 2% psilocybin per dried gram weight, but I bet those minute changes in potency are not nearly as predictive as how the diner responds to psilocybin more generally. Note well: if you are on SSRI medications, the chances are you won't feel anything at even larger doses. The authors do warn that if you switch to a foraged species like *P. azurescens*, you can expect your risotto to pack twice the punch.

When I review cookbooks, I always test a selection of the recipes to determine if they work and taste good. In the case of *The Psilocybin Chef's Cookbook*, I didn't test as many recipes as I usually do, in part because of access problems of the main ingredient, but mainly because I had to set aside a whole day to test one recipe.

The first I tried was Crepes with Shroomberry compote. I used tiny wild blueberries. Maybe because they are lower in water, they didn't explode the way a commercial blueberry does, and so I ended up with a nubbly compote. Usually, a blueberry compote takes a few minutes to set up, but these only did after I'd cooked them twice as long as recommended and then let them cool. The next step was to add lemon juice from a whole lemon, which I did, but then the compote lost its gel and really was only fit for smoothies. I may have had a larger and more juicy lemon than the authors tested. I didn't bother to add the mushrooms. So, if you try the blueberry compote, use supermarket berries, which I imagine will work well. Be judicious with the lemon juice, however, since there is no measured instruction, and start out with half what the recipe recommends.

I moved on to the Shroomshuka. Usually, recipe writers try to give weights and volumes, so I had to assume 1.5 cans of tomatoes was a 16-ounce can plus another 8 ounces, right? Maybe not in the UK, where the authors are from. Likewise, we try to include a visual cue with all cook times. So, cook 3 to 4 minutes… until what? The peppers are soft? Because the vagaries of ovens make temperature instructions problematic, it is key to offer visual cues.

Another newbie error—when the photo and the recipe don't match: there's a dribbled sauce in

the Shroomshuka photo, but no sauce in the recipe, and a garnish of cilantro, also not mentioned in the recipe. The photo does illustrate well the fact that the eggs swim in an ocean of sauce. (In general, the authors apologize for the photos, some of which I thought were perfectly good, because "there isn't much natural light in England.")

But I quibble: the flavors were good, if elemental, the kind of dish somebody living in college housing might whip up: one pot, a few ingredients, and the potential to get high. I ended up using the flavor profile in an adjacent dish for later: harissa, tomatoes, cinnamon and cumin as the base for a lentil soup.

After about 30 minutes, I started to write differently. (I didn't mention that I am writing this review after consuming the dish.) I am definitely more relaxed, not tense at all about how I as the writer appear, and generally finding the material fun and, okay, kind of hilarious. It's common at psilocybin-assisted therapy retreats to serve a light breakfast or even fast on trip day. "People fast because if there is less food in your belly the drug affects you more, and you are less likely to be nauseated," says Dr. Mandrake. A Mazetec ceremony I observed required a full day of fasting in anticipation of an evening trip. Having little in your stomach can mitigate stomach upset, but I was so hungry that it dominated the early hours of my experience and led me to think a lot about how the ugly feeling of hunger is all too familiar to many people in the world. On the other hand, a full belly might slow the absorption of the drug, leading to a longer period before the effects kick in. Indeed, Dr. Christopher Hobbs says it can take as much as two hours to metabolize the drug if you've consumed a meal of stewed oxtails beforehand.

Another way people avoid nausea is to use the Lemon Tek, in which ground mushroom is combined with lemon juice. This method is based on the notion that chitin is responsible for nausea. Lemon juice does help break down fungal cell walls. It also accelerates the onset of effects, maybe by releasing those psilocybin molecules a bit sooner.

Whatever; Haze and Mandrake recommend having warm ginger tea on hand to combat nausea.

I don't see why you couldn't use powdered *Psilocybe* mushrooms in any dish. Half a gram of powdered *Psilocybe* is about a half teaspoon—not really a problem to add to a recipe unless you are stuck in the 1980s and still doing nouvelle cuisine. There is the concern about heat destroying the molecule's potency. While some sources insist that psilocybin degrades when steeped in boiling water, a 2020 paper found that powdered mushrooms can withstand 212 degrees Fahrenheit for 30 minutes with little loss of potency.

Most people don't add their mushrooms to recipes; the common method is to steep them in hot water to make a tea. However, teas are only "good" for a day, according to Paul Stamets. After that, he says "ethyl alcohol must be added to prevent fermentation." DO NOT, as one fellow did, inject mushroom tea into your bloodstream. In his case, it led to acute liver injury and organ failure of his kidneys and lungs.

The wellness company Numinus has developed a mushroom tea bag – for clinical purposes right now, but one can imagine someday rustling around in your sister-in-law's kitchen cabinet to find a box of psychedelic tea next to her Sleepy Time. But for now, the idea of packing a picnic with Dr. Mandrake's Grilled Cheese Shroomwich, hot and soft with camembert and Shropshire blue (because they're British), sprinkled with mushroom powder and smeared with red onion marmalade sounds like a day in the park. And mushroom chocolates, for which there are three recipes in *The Psilocybin Chef Cookbook,* are trendy right now. Folks are capitalizing, in part, on the Aztec tradition of consuming cacao with the mushroom, cacao being a potential MAO inhibitor that might intensify and elongate the trip (because it slows down the natural disintegration of the psilocin molecule). Or maybe just because chocolate.

Regardless of how much mushroom powder you add to your dish, even the smallest amount will draw out time. Even microdoses cause this effect. I've been writing, sitting here for almost 3 hours straight. Where did the time go? With his

colleagues, Marc Wittman, a neuropsychologist at the Institute for Frontier Areas of Psychology and Mental Health in Germany, is the author of many papers on time perception and of the book, *Altered States of Consciousness: Experiences Out of Time and Self*. He and his colleagues have looked at how psilocybin affects time perception and found the genes that regulate the serotonin system – the system psilocin excites – are also related to time perception.

"So, yes," he told me in conversation. "There seems to be a strong connection between the serotonin system and time perception." (Here's a tip: if you make the lentil soup on mushrooms, be aware that time moves slower for you than it does for lentils.)

Indeed, you may be questioning my timing, and wondering why I am reviewing a book that is two years old? Besides the fact that 2020 seems like yesterday to me, it's because not many – if any – mainstream cookbook reviewers have taken it on. Even so, I had the book for nine months before I tested any recipes. Think of it this way: *The Psilocybin Chef Cookbook* took a while to come on, but when it did, it was a lot of fun.

Eugenia Bone is writing a book about psychedelic mushrooms for Flat Iron Books, Macmillan Publishers.

Spargelsuppe with Morels
By Julie Schreiber, Culinary Arts Committee Chair
Yield: 4 servings (as a first course)
Spargelsuppe: That's German for "white asparagus soup." This one is super elegant and doesn't call for cream. White asparagus are, to quote *Cook's Illustrated*, "simply green asparagus that have never seen the light of day." Soil is mounded over the asparagus as it grows, blocking the sun. As a result, the plant's chlorophyll and its associated greenness never develop. White asparagus stalks should be peeled, as their skin is bitter, but underneath they are sweet and tender. They are a springtime treat, often expensive, and marvelous with the other treasure of the season, morels. This recipe was first published in *The Fantastic Fungi Community Cookbook*.

1 pound white asparagus
3 tablespoons unsalted butter, divided
½ cup minced white onion
3 cups chicken stock, plus 2 tablespoons if needed
20 small fresh or dried morels (see note)
Dash of dry sherry
2 tablespoons dry white wine
Salt and freshly ground black pepper
Chopped parsley or chives, or minced onion grass, for garnish

Using a vegetable peeler, peel the lower ¾ of the asparagus stalks. Chop the asparagus coarsely, leaving 1 inch of the tips intact. Set the tips aside.

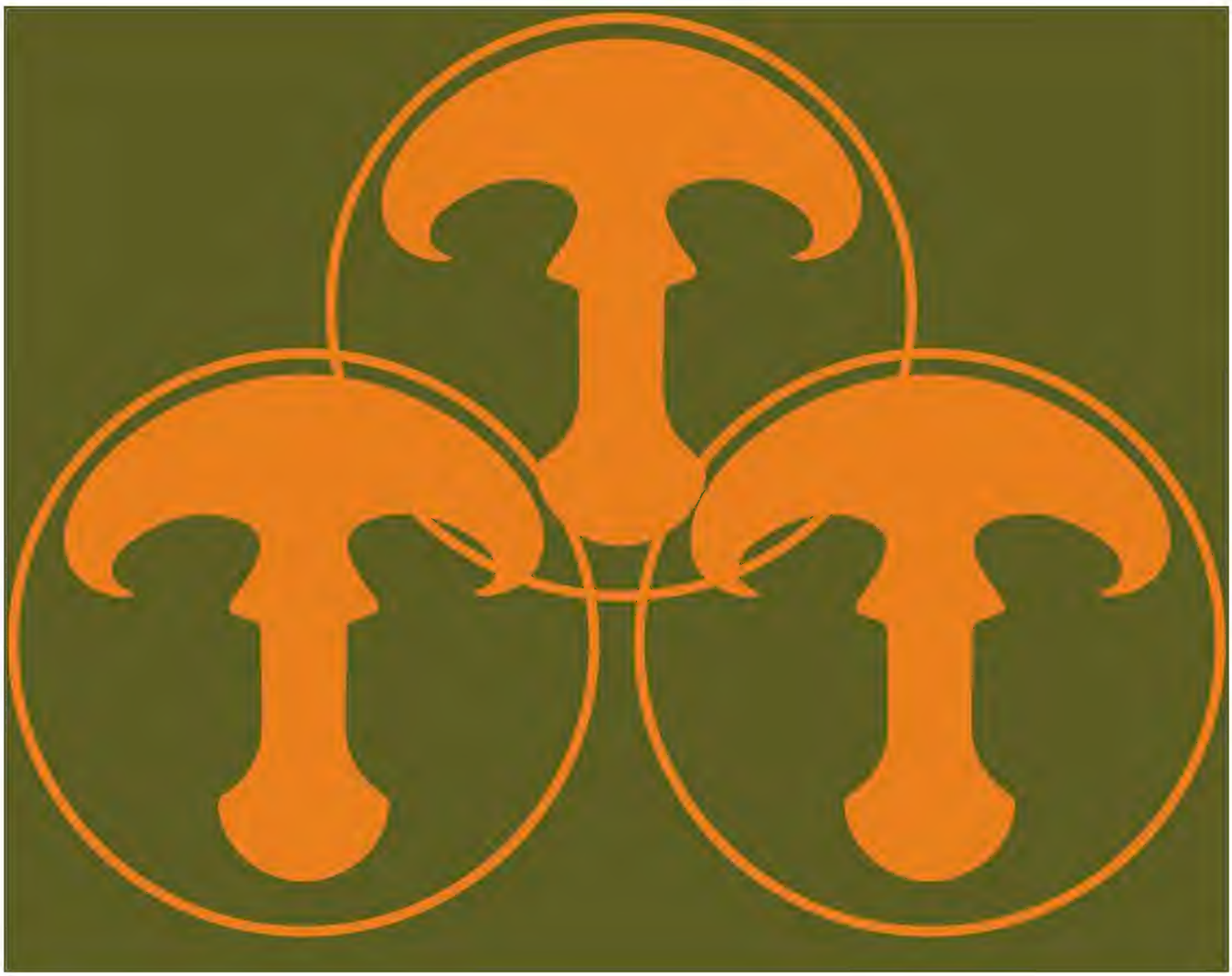
Heat 2 tablespoons of butter in a medium-sized soup pot over medium-high heat. When the butter is melted, add the onion and cook until it is soft, a few minutes. Add the chopped asparagus, without the tips, and continue cooking, stirring often, until the asparagus begins to soften, about 5 minutes. Don't let anything get brown! Turn the heat down a bit if needed. Add the chicken stock, cover, and cook over medium heat, just barely bubbling, for 30 to 35 minutes, until the asparagus is very soft. Take the soup off the heat.

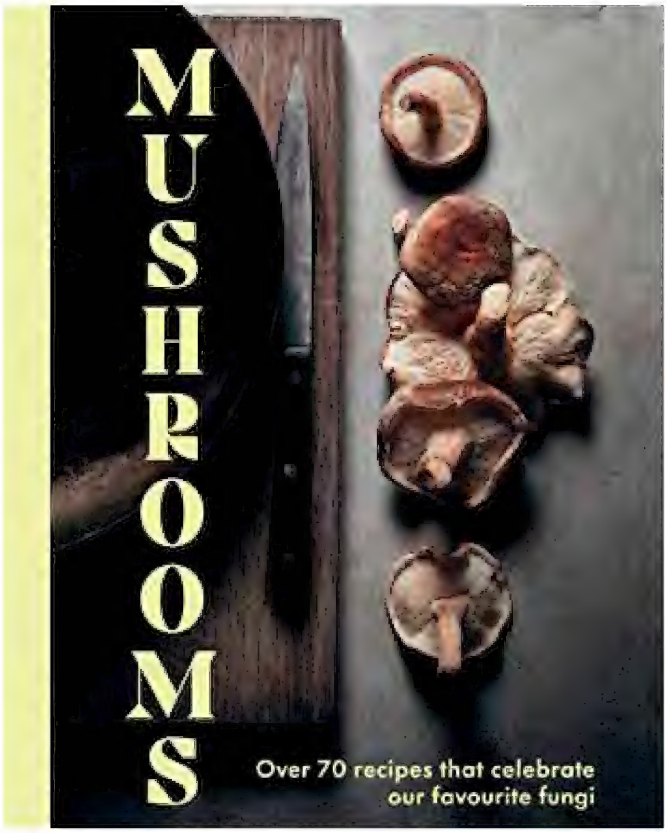
In the meantime, while the soup is cooking, heat the remaining tablespoon of butter in a medium-sized skillet over medium heat and add the morels. Cook the morels until the fresh morels give up their water or the rehydrated morels soften, a few minutes, then add a dash of sherry and continue cooking until the morels are fork-tender and the liquid has mostly evaporated, about 10 minutes altogether. If, when cooking rehydrated morels, the pan dries out before the morels are cooked, add 2 tablespoons of chicken stock and continue cooking until the morels are tender.

Puree the asparagus soup in batches or, as I usually do, remove the vegetables and just puree them, then stir the puree back into the stock. Add the asparagus tips and return the soup to medium heat. Cook gently until the asparagus tips are tender, about 15 to 20 minutes. Add the white wine and season with salt and pepper to taste.

Serve the soup with a share of the morels on top of each portion. A little fresh chopped parsley is nice or fresh chopped chives. I'll often garnish with a little minced onion grass if I find it growing in the yard, which I often do in the spring.

Note: If using dried morels, rehydrate them in water for 15 minutes, then drain.





Book Review: by Jess Starwood
Mushrooms: Over 70 Recipes Which Celebrate Mushrooms
by Martin Nordin
Hardie Grant, 2022
183 pages

The author of *Mushrooms: Over 70 Recipes Which Celebrate Mushrooms,* Martin Nordin, is not a forager, as he professes in his introduction, nor does he have an extensive culinary background. However, his expertise in food styling and photography entices the reader to dive deeply into this beautiful book. His photos are captivating and sensuous. At first glance, the reader may not realize that all of the recipes are vegan, especially with the richly colored photography. Nordin states that the recipes using nut cheeses and other dairy alternatives can be altered to substitute actual dairy.

The book starts out with very brief descriptions of common mushrooms, their particular nuances of flavors and textures. There's definitely a lot left to be desired in this section and it is possibly where the author's inexperience with mushrooms shows the most. The recipes themselves are separated, interestingly, by cooking methods: Boiled, Fried, Oven-Roasted, Barbecue-Grilled, Deep-Fried, Pickled, Dried and In the Pantry. The last section includes basic recipes for staples like kimchi, lacto-fermented mushrooms, mushroom broths, mushroom powders, pizza dough and dashi.

The book introduces mushrooms in a way that is not overwhelming, yet borders on simplistic, so it makes it easy for anyone – supermarket foragers in particular – to pick up the book and make something delicious without too much effort. Some recipes are vague in suggesting which specific mushroom to use, allowing flexibility in what the cook may have on hand. Seasoned foragers, though, may find the selection of mushrooms featured uninspiring, with only one morel recipe, two for porcini and two for chanterelles. Most of these recipes use portobello, champignon, king oyster and shiitake as their main ingredient.

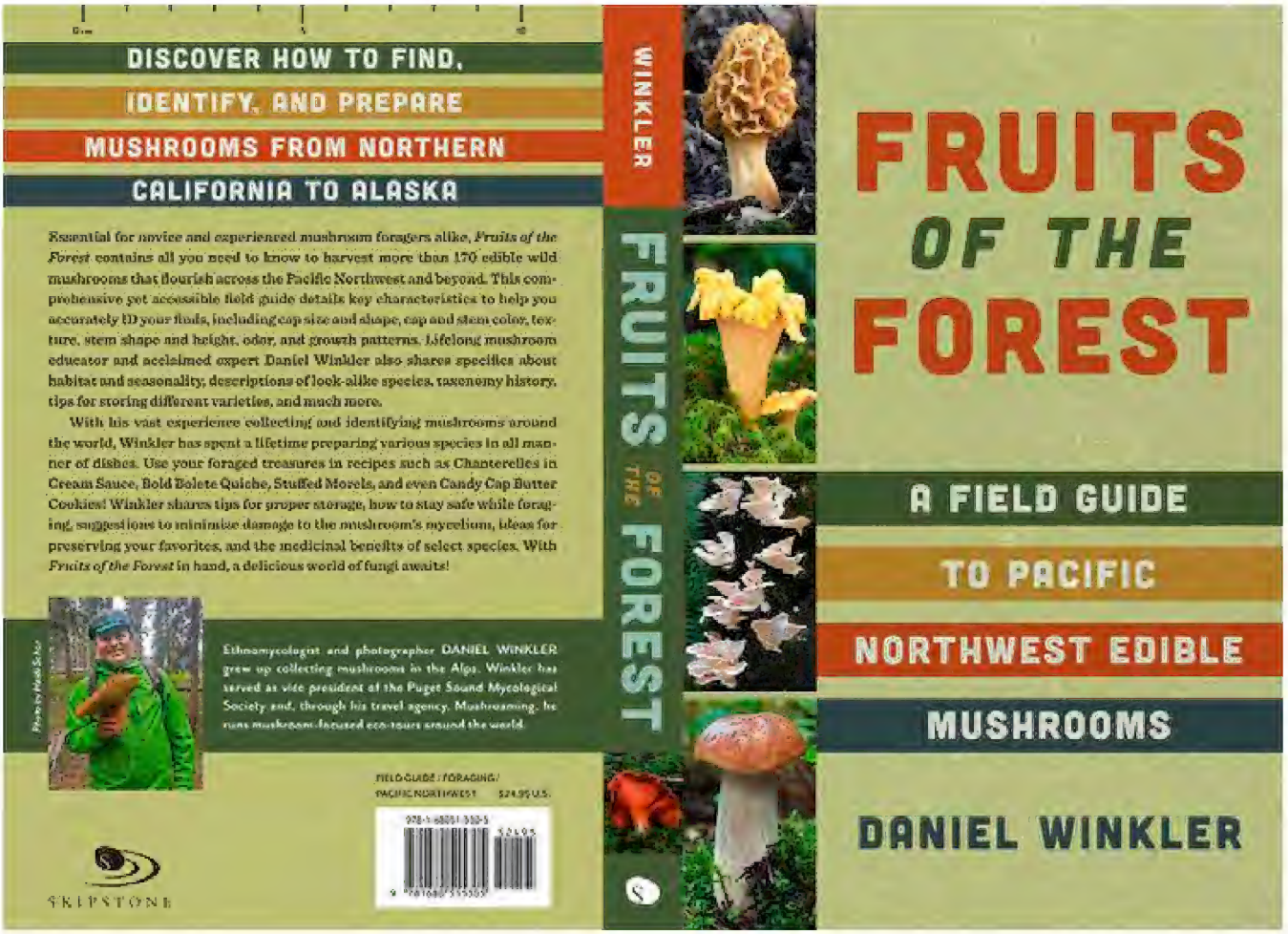
The ingredient lists are fairly short, with only a few recipes having items that may be a little more difficult to source such as kansui and ramen flour to make the homemade ramen noodles. Otherwise, the ingredients used are very easy to source from a well-stocked grocery.

The recipes generally have an Asian influence, focusing on umami and enhancing subtle flavors, but also includes plenty of pasta, pizza and soups, with photos that are a satisfying feast for the eyes despite being vegan. If you're looking for recipes heavy on the cream, butter and meat, this is not your book. However, there definitely is not a lack of flavor or richness in these recipes, with use of cashew and other nut butters, oils, and grains.

Having tested out a few recipes, I find the directions are mostly straightforward and to the point. However, in some instances, instructions could have been more detailed. When testing the Porcini Mushroom Risotto with Cashew Butter recipe, the instructions said to fry all the spices, dried porcini and rice into a frying pan for ten minutes, which resulted in burnt spices and mushrooms despite how much I stirred to prevent them from burning. This resulted in a bitter note in the end result and a very dark risotto, unlike the photo provided. The flavor was a bit lackluster and a little more creaminess would have been desirable.

There are a few interesting surprises such as the Porcini Mayonnaise, Popcorn with Mushroom Spice and the use of whiskey in several recipes like the Whiskey-Marinated Chestnut Mushrooms on a Baguette. The White Pizza with Pumpkin, Chanterelles and Shallots is a delightful and appropriate pairing and the Porcini Mushroom Risotto with Cashew Butter is full of depth and richness.

While this is an entry-level book into the realm of culinary mushrooms, it is a beautifully styled and photographed cookbook that would make a great gift to new mushroom cooks or anyone who appreciates a visual feast or is looking for food-styling inspiration.


DISCOVER HOW TO FIND, IDENTIFY, AND PREPARE MUSHROOMS FROM NORTHERN CALIFORNIA TO ALASKA
Essential for novice and experienced mushroom foragers alike, Fruits of the Forest contains all you need to know to harvest more than 170 edible wild mushrooms that flourish across the Pacific Northwest and beyond. This comprehensive yet accessible field guide details key characteristics to help you accurately ID your finds, including cap size and shape, cap and stem color, texture, stem shape and height, odor, and growth patterns. Lifelong mushroom educator and acclaimed expert Daniel Winkler also shares specifics about habitat and seasonality, descriptions of look-alike species, taxonomy history, tips for storing different varieties, and much more.
With his vast experience collecting and identifying mushrooms around the world, Winkler has spent a lifetime preparing various species in all manner of dishes. Use your foraged treasures in recipes such as Chanterelles in Cream Sauce, Bold Bolete Quiche, Stuffed Morels, and even Candy Cap Butter Cookies! Winkler shares tips for proper storage, how to stay safe while foraging, suggestions to minimize damage to the mushroom's mycelium, ideas for preserving your favorites, and the medicinal benefits of select species. With Fruits of the Forest in hand, a delicious world of fungi awaits!
Ethnomycologist and photographer DANIEL WINKLER grew up collecting mushrooms in the Alps. Winkler has served as vice president of the Puget Sound Mycological Society and, through his travel agency, Mushrooming, he runs mushroom-focused eco-tours around the world.
FIELD GUIDE / FORAGING / PACIFIC NORTHWEST $24.95 U.S.
SKIPSTONE
WINKLER
FRUITS OF THE FOREST
FRUITS OF THE FOREST
A FIELD GUIDE TO PACIFIC NORTHWEST EDIBLE MUSHROOMS
DANIEL WINKLER

Book Review: by Melodie Gates, NAMA Treasurer
Fruits of the Forest: A Field Guide to Pacific Northwest Edible Mushrooms
by Daniel Winkler
Mountaineers Books, 2022
384 pages

What an honor to get the opportunity to review Daniel Winkler's wonderful book. With over 25 years of experience here in the Pacific Northwest, Winkler has established a reputation as an expert. He leads tours and has taught about mushrooms to enthusiasts all over the world.

New mycophiles and newcomers to the Pacific Northwest need this field guide! Furthermore, because of DNA sequencing, we have learned a lot more about fungi and this new information renders older books unreliable in some cases. Winkler's guide is current in nomenclature and will give you an excellent foundation for hunting edible mushrooms in the Pacific Northwest's forests. Yes, you will find terms new to you but as with any new subject this is a fun part of learning.

Winkler explains how mushrooms are "fruits of the forest" by comparing them to the apples on a tree – but the tree itself is underground. He also explains the relationship between plants and mushrooms. The one thing I have always taught my newcomers is the importance of learning the habitat. I can't count the number of times I have been asked, "how do you know where to look?" You look at the trees and then you know where to start looking for mushrooms.

This book is well laid out by macro features of the mushrooms. The pictures are very well done, show-

ing the cap, stipe and gills, whenever possible. The author discusses the edibility of each mushroom and includes the poisonous ones, so you don't make a fatal mistake. If I had to fault this book, it is that it doesn't give you a clue when these mushrooms are likely to pop up – important information for newcomers. If you are from the Midwest, you start looking for chanterelles in July; here in the Pacific Northwest, they start popping up in September.

Winkler also shares a selection of recipes to help you get the mushrooms from the forest to your fork. I tried the Bolete Butter on page 333. My non-mushroom friends found it earthy, not overbearing, lovely and enjoyed it on fresh bread I had made. It stores well and will be a treat to share again soon. I can also tell you I have had his chanterelle vodka and it was to die for.

This is a must-have book for mushroom hunters in the Pacific Northwest. It is sized to fit in your day pack and the sturdy cover appears to resist rain.

Instagratitude! Thanks to Our Instragram Takeover Artists

by Kathy Yerich, Marketing Committee Chair

"If a tree falls in the forest and no one is around to hear it, does it make a sound?" This age-old thought experiment invites ponderings of our observations and perception. How about, "If a mushroom grows and no one is there to photograph it, does it exist?" Heartfelt thanks to the Instagram Takeover Artists listed below, who provided new and provocative mycological content for us to ponder each week! Through social media, we have ever more eyes on mushrooms from the forests, gardens, grow rooms, labs and photography studios from all over our world. Follow us @NorthAmericanMyco and see what everyone is talking about!

Andrew Reed	@mossycreekmushrooms
Ian Purkayastha	@ianpurkayastha
Julie Schreiber	@jaschreib
Joey Hafley	@myceinheritance
Rowan Nygard	@rowan_nygard
Danny Newman	@kallampero
Elle Matthews	@elfirefly
Maria Morrow	@yipkiyay
Rose Tursi NAMA Visual Arts Chair	@tursiart
Mandie Quark NAMA Foray Chair	@mushroom_madman
Mike Snyder	@wildwisebotanicals
San Diego Mycological Society	@sdmyco
Phyllis Ma	@mushroomsandfriends

Myco Calendar

Regional and Continental Events

2023

April 14 to 16
Morel Madness
Osceola, MO
https://momyco.org/

May 19 to 21
Texas Mushroom Festival
Canton, TX
hnorthtexasmycology.org

July 20 to 23
Hiles Foray
Hiles, WI
wisconsinmycologicalsociety.org

July 30 to August 6
NAMA_MX23: Regional Foray in Mexico
Valle de Bravo MX

August 14 to 17
NEMF Foray
Kerhonkson, NY
nemf.org

August 24 to 27
Appalachia NAMA 2023
Hendersonville, NC

September 7 to 10
Northwoods Foray
Cable, WI
wisconsinmycologicalsociety.org

September 30
Twenty Third Annual Gary Lincoff Mushroom Foray
Allison Park, PA
wpamushroomclub.org

About Our Mycophile Contributors

Trent Blizzard has lived in the East, West and Midwestern U.S. A website designer by trade, Trent fell in love with Kingdom Fungi – and with his wife Kristen – in a modern myco fairy tale. Together, they are Modern Forager. They are authors of *Wild Mushrooms: A Foraging Guide and Cookbook* and also self-published *Burn Morels*. They relocated from Colorado to northern Wisconsin in the Fall of 2021 but spend time on the Oregon Coast every winter to keep foraging year around! Trent enjoys studying digital maps, chasing burn morels, making pottery, cultivating mushrooms and making maple syrup.

Cover artist Alyssa La Freniere displays her work in Ontario, Canada. She is currently studying in Japan.

Mycophile Editor Barbara Ching is Past President of NAMA. Before settling into a career as a Professor of English, she wrote occasional features for the *Virginian Pilot* (Norfolk Virginia), and book reviews and long-form reporting for the *Memphis Flyer*. She is a member of the Minnesota Mycological Society.

Eugenia Bone is an internationally known food and science writer whose work has appeared in many anthologies, magazines, and newspapers. She is a member of the faculty at the New York Botanical Garden where she teaches classes on mycophagy and psychedelic mushrooms. She is the author or co-author of eight books on food and biology, including the category staple *Mycophilia* (Penguin Random House, 2011) and, most recently, the *Fantastic Fungi Community Cookbook* (December, 2021). To learn more, visit her website: http://www.eugeniabone.com/

Robert Courteau is a former chef, President of the Ottawa Mycological Society, and creator of Think Fungi, an organization dedicated to fungi research, education, and conservation. NAMA members can also find him hosting the Culinary Arts Committee's webinars. When he's not focused on mushroom-related activities, he's usually cooking up a storm, or relaxing with his wife and pets.

Melodie Gates received NAMA's Harry and Elsie Knighton Service Award in 2021 in recognition of her longstanding leadership and mentorship in the South Sound Mushroom Club on Washington State's Olympic Peninsula. She has also served as NAMA's Treasurer since 2015.

NAMA_MX23 Event Organizer Zachary Hunter is a lifelong devotee to flavor, a professionally trained chef obsessed with mushrooms and uncovering the unknown with regards to edible mushroom chemistry and physiology. He is a member of NAMA's Culinary Arts Committee. He lives in Oaxaca, Mexico with his wife Kim, where they run MycoAdventures in the mountains of Oaxaca and beyond. Check out his blog for some interesting "food for thought!" www.thefungivore.com/index.html

Born in Farmington, Missouri, Joseph "Mycæl" Hafley was introduced to the natural world as a child. He foraged wild edibles in the woods with his father and brother and gained a deep appreciation for food by planting, tending, harvesting and cooking vegetables with his grandparents. Drawn to the culinary arts, he now cooks at Bulrush in St. Louis where the hyper-local and foraged menu inspires him to focus on edible mushrooms, mycophagy and mycology. He is Vice President of the Southeast Missouri chapter of the Missouri Mycological Society and contributes to their newsletter, leads forays, and creates mushroom tasting events.

Dr. Tess Kenney is the Chair of the Visual & Performing Arts at Concordia University Wisconsin - Ann Arbor, former President of the Wisconsin Mycological Society and the Graphic Design Specialist who designs the North American Mycological Association's publicatioin *The Mycophile.* Tess was also one of the main organizers for the NAMA/WMS Regional Northwoods Foray in 2022. Her latest series of paintings, etchings and ceramics is entitled *The Forest Floor*.

Dave Layton serves as NAMA's First Vice President and plays upright bass with the Unidynes, recently inducted into the Iowa Rock and Roll Hall of Fame. He hopes to write a book about his mushroom mistakes. As you might imagine, there's a lot more to say. He is a member of the Prairie States Mushroom Club and a commissioner of Volunteer Iowa (ICVS), which is responsible for administrating Iowa's National Service and volunteer programs.

John Michelotti is the founder of Catskill Fungi, which provides outdoor educational classes, cultivation courses, mushroom art, and mushroom health extracts. John is a past president of the Mid-Hudson Mycological Association (MHMA) where he co-founded the Catskill Regional Mycoflora Project as well as the Gary Lincoff Memorial Scholarship. He has served on the Mushroom Advisory Panel for Certified Naturally Grown to develop ecological standards in mushroom production. He was chosen by the Catskill Center as a "Steward of the Catskills" for his contribution to the environment. His goal is to educate and inspire people to pair with fungi to improve health, communities, and the environment.

Pete Ninneman President of the Bluegrass Mycological Society.

A molecular biologist and grant writer by training, Mandie Quark earned her master's degree in Biochemistry from the University of the Sciences (2014). Currently, she is devoted to fungal-DNA barcoding initiatives and is excited to use her gift of creative communication to explore the technical complexities of sequencing technologies with her peers. In addition to molecular mycology, and her new role as NAMA Foray Committee Chair, Mandie serves as Communications Leader for the Fungal Diversity Survey (FunDiS), a biodiversity conservation organization. She also enjoys organizing international forays through her business, Mycena LLC, speaking at mushroom-related events, and teaching classes specifically tailored toward mycologists.

Bruch Reed is proud to serve as Chief Operating Officer for NAMA. Following a youth in which his family taught him mushroom-pursuing basics, he became very fortunate in developing friendships with several of our time's mycological leading lights, including Dr. Patrick Leacock, who brought him into the Illinois Mycological Association in 2007 and through whom he met the late, great Gary Lincoff and Dr. Britt A. Bunyard, among others, who warmly and generously invited him into the magical world of far-flung forays. Besides studying fungi, he is a secret plant nerd and grows a few hundred orchids in his Chicago apartment, and acts.

Jess Starwood is the author of Mushroom Wanderland: A Forager's Guide to Finding, Identifying, and Using More Than 25 Wild Fungi (Countryman Press, 2021). She is the editor Sporeprint, Newsletter of the Los Angeles Mycological Society, and serves on the Board of Directors of the Arizona Mushroom Society. You can learn more about Jess from her website: https://jstarwood.com/

Kathy Yerich is a longtime dedicated member both of NAMA and of the NAMA-affiliated Minnesota Mycological Society (MMS) and currently serves as Chair of NAMA's Marketing Committee. She spearheaded the creation of MMS' Marek Turnowski Memorial Scholarship, on which NAMA's new Annual Foray Scholarship Program is based. She lives near Minneapolis with her patient and hilarious husband, Fred Yerich.

Bailey Sterk is an MA candidate in English Literature at Iowa State University. She focuses on the intersection of environmental literature and feminist studies; particularly, the ways that narrative informs our relationship with the world around us. Her interests include contemporary fiction, weird fiction, and science fiction, and the ways in which these works disrupt and reform our capacity for collaborative world-building.

Rose Tursi serves as Chair of the NAMA Visual Arts Committee and is an illustrator by profession. You can see her work at www.tursiart.com. An Air Force brat turned Army spouse, she's lived all over the place and been involved in various myco clubs over the years, including South Sound Mushrooms in Olympia, located Olympia, Washington as well as Wisconsin Mycological Society. Rose's hobbies include ceramics and other arts & crafts, permaculture, foraging, gardening, cooking and cultivating gourmet mushrooms.